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FROM a correspondent we learn that the Chicago Refining Company is putting up new large refining-works in that city.

THE New York Academy of Sciences, at a recent meeting, took measures to urge the publication of Prof. JAMES HALL'S projected volumes on the paleontology of the State of New York.

IN Switzerland, small coins are now made from pure metallic nickel rolled by the Fleitmann process. These coins are said to be much superior to the alloy of 25 per cent of nickel and 75 per cent of copper hitherto used there.

WE call attention to the card of Mr. CARL ERLWEIN in another column, as one which it will be worth while for those to follow up who are in need of such services as are there offered. We believe that Mr. ERLWEIN can give excellent references as to his skill and fidelity.

THERE has been very much tariff talk in and out of Congress during the present session, and matters are by no means moving as smoothly for the ultra tariff men as they professed to believe a few months ago. There is, it seems, considerable opposition even to a purely civilian tariff commission, although a majority of the Ways and Means Committee has just reported favorably a bill providing for a commission composed exclusively of men not in Congress or in any other branch of the public service. Mr. RANDALL proposes to substitute for it a mixed commission, a scheme which would probably be distasteful both to those who want an expert examination and those who do not believe in letting such an important matter go out of the hands of the members of Congress.

THE *Sun*, of this city, closes a long editorial article based upon our annual review of mining stocks with the following sentences, which every one who has the best interests of mining at heart will cordially indorse:

"The existing distrust of mining companies is an inevitable result of the chicanery which has distinguished the management of many of them. And even where the deception has not been intentional, the managers themselves being buoyed up by delusive expectations regarding a business of which they really knew nothing, the consequences have not been less disastrous.

"In the end, however, the legitimate and profitable mining industries will be the gainers by the bursting of the bubble of mining speculation. The companies which are conducting their affairs honestly and skilfully, and are really earning handsome dividends, will win the confidence of careful investors, and their stock will have a stable market value. They suffer in reputation now because the failure of so many worthless and hopeless enterprises has discredited the whole mining business."

THE technical press, and notably the *Iron Age* and the *American Machinist*, have paid the memory of the late Mr. A. L. HOLLEY an eloquent tribute. Among the many testimonials of sincere affection, we may note the following resolutions, which were passed at the monthly meeting of the Century Association, and in support of which speeches were made by Messrs. O. CHANUTE, CHARLES MACDONALD, D. VAN NOSTRAND, R. W. RAYMOND, and SALEM H. WALES.

"*Resolved*, That in the death of Alexander Lyman Holley, the Century Association deplores the loss of one of its most honored and beloved members, whose varied accomplishments and great achievements commanded the admiration, as his tireless activity and stainless honor won the respect of all; while to innumerable friends who were privileged to know in cordial intercourse his brave, joyous, generous character, the sense of public and professional bereavement is hidden in the deeper shadow of personal grief.

"*Resolved*, That the secretary be instructed to enter these resolutions in the minutes of the Association, and to communicate them to the family of Mr. Holley, together with the assurance of our heartfelt sympathy."

THE disaster in the Grove shaft of the Midlothian collieries near Richmond, Va., is probably the worst that has befallen any coal mine in this country for a very long time. There can be little doubt that it was the result of an explosion of fire-damp; but as usual, much mystery surrounds it so far as the immediate cause of the firing of the gas is concerned. Thirty-two men perished, and after bringing five of the bodies to the surface, the fire in the mine had gained such headway that all attempts to penetrate farther into the mine had to be abandoned, and measures were taken to check the spread of the fire. The Midlothian mines have always been considered dangerous in this respect, and as early as 1840 fifty-two men were killed, and later, in 1876, another explosion, less fatal to life, occurred. The fire in this case will probably destroy every evidence which might aid in tracing the cause of the explosion, which will, in the absence of it, take its place in the long list of "unaccountable" calamities.

DR. THOMAS M. DROWN, Secretary of the American Institute of Mining Engineers, has just issued a circular relating to the programme of the annual meeting to be held at Washington. The meeting will open on Tuesday, the 21st, with addresses by the Hon. N. P. HILL, on behalf of the Regents of the Smithsonian Institution, and by Major J. W. POWELL, Director of the U. S. Geological Survey and Chairman of the Local Committee of Arrangements. At the conclusion of this session, Major and Mrs. POWELL will hold a reception for the members of the Institute and the ladies accompanying them. After a morning session for the reading and discussion of papers, in the afternoon a session will be held in memory of ALEXANDER LYMAN HOLLEY, at which all those members who personally knew Mr. HOLLEY will speak, each contributing briefly from his own experience. Those who can not be present are invited to send letters to the secretary before the meeting. Besides the Wednesday evening session, which will be devoted to papers and discussions on iron and steel as structural materials, there will be sessions on Thursday and Friday mornings. The usual subscription-dinner will be held on Thursday afternoon.

SOME time since, we called attention to the lawlessness in Arizona, and noted the fact that quite a numerous class of citizens connived at the acts of the disorderly element, and that in some cases their sense of justice was so warped by sectional feeling as to lead them to pronounce them justifiable. Since then, it appears that matters have gone from bad to worse, and the account given by Acting Governor KIRKWOOD to President ARTHUR of the present state of society is well calculated to make Eastern people pause before they invest money in so apparently insecure a section of the country. Among the many robberies and outrages recently committed, we may cite the case of the stage which carried $6000 from Tombstone to Bisbee, the money to be used in payment of wages to the men of the Copper

Queen. It is proposed that the troops be used to reinforce the posse, or in many cases form the posse. As a temporary expedient, this may do well enough; but the only measures which can prove of lasting benefit must come from the better classes of citizens themselves. They must take matters into their own hands, and redeem the territory from the terrorism of cowboys and other outlaws.

WHAT ORES CAN BE CONCENTRATED.

A correspondent in Colorado requests us to "explain in a plain way what constitutes an ore of gold or silver suitable for concentration." Like most simple questions, this is not to be completely answered in few words. The art of concentrating ores can not be taught in an editorial paragraph; and only those who understand both the theory and practice of that art can judge whether a given ore may be successfully concentrated. Even such persons, before actually deciding this question, need to study the locality and the conditions, and probably also to make some actual experiments on the ore itself. If, therefore, we undertake to state in plain words, and briefly, for the benefit of our correspondent, the characteristics of ores suitable for concentration, it must not be supposed that we have exhausted the subject, or furnished an infallible guide of judgment.

At the very beginning, it should be remembered, successful concentration is to some extent a relative term. Instances occur in which the valuable and the worthless constituents of an ore behave so much alike under mechanical treatment that they can not be separated at all. On the other hand, it seldom or never happens that a complete separation can be effected by one operation. The general rule is, that the attempt to get the "headings" or concentrates free from worthless material—that is, to make them rich—throws more or less valuable material into "tailings" or "middlings;" while the attempt to obtain tailings free from valuable material leaves a large amount of worthless material in the other grades of product. Between these extremes there are many degrees, involving, in well-conducted operations, much re-working of intermediate grades; and the final choice of that combination of operations which will give the largest net profit is a matter of no little difficulty.

The basis of all mechanical separations (except magnetic separation, as applied to some iron ores) is the specific gravity of the minerals contained in the crude material treated. Particles of equal size and similar shape, but of different specific gravity, can be separated into classes according to their gravity; and this can be done the more perfectly, the greater is the difference in gravity. A heavy mineral, like galena, for instance, can be readily separated from a gangue like quartz; less readily from heavy-spar or zinc-blende.

All minerals, and particularly those which yield a good deal of fine stuff in crushing, must be classified as to size before they can be successfully classified as to gravity; for the simple reason that a large piece of a lighter mineral may behave like a smaller piece of a heavier mineral. Without going into the mathematical explanation of this fact, it is sufficient to cite the well-known experience of gulch-miners, who find gold and the largest pebbles or boulders of quartz lying together at the bottom of the channel, on the bed-rock.

In the concentration of gold and silver ores (though not in that alone), another principle is involved. Not only the gravity and the size, but also the shape of mineral particles, determine their behavior. Fine scales, for instance, even of a mineral of high specific gravity, will float or settle but slowly in a current of water, notwithstanding their gravity, and hence may be lost in the mass of worthless material, from which they might be expected, on the grounds of weight and size alone, to separate themselves.

This difficulty is peculiarly felt in the treatment of silver ores. Gold associated with pyrites can often be saved without excessive loss; at least, enough can be saved to "pay." But the so-called "true silver ores," that is to say, the minerals which contain silver as an essential constituent, together with many of the argentiferous ores of other metals, break under the stamp into particles which can not easily be separated by gravity. Silver-glance, ruby silver, argentiferous gray copper, etc., belong to this class, and can be concentrated only at so great a loss that it is usually better to hand-sort the ores containing them, and not attempt to enrich the product otherwise.

Argentiferous galena is the most easily separated of the silver-bearing ores. Yet it often happens that an ore containing galena, and showing by assay a considerable value in silver also, proves unsuitable for concentration. In such cases, the difficulty usually is, that the silver of the ore is not in the galena, but in some finely-disseminated silver-mineral of the brittle class. The simplest way for the common miner to test this question is to take a careful average of his ore, crush it to coarse sand, have a sample of it assayed for lead and silver, then "pan" down a weighed quantity as far as he can without losing too much galena, weigh the remainder, and have a sample of that similarly assayed. A comparison of the two assays will show him his loss in lead, his loss in silver, and the proportion of silver to lead in the original ore and in the concentrates. If, for instance, five pounds of an ore containing 10 per cent of lead and 20 ounces of silver per ton be panned down to one pound, which is found to contain 40 per cent lead and 25 ounces silver per ton, the loss has been 20 per cent lead and 75 per cent silver; and it is highly probable that, although the use of machinery and skill in ore-dressing on a large scale would greatly reduce the loss in lead, the loss in silver would still remain too large for profitable working.

We say, then, to our correspondent, If you want to know whether an ore containing gold or silver, with some heavy mineral such as galena, zinc-blende, or pyrites, is suitable for concentration, make a rude concentration of it for yourself, and thus determine whether the gold or silver is contained in the heavy mineral so that mere crushing will not separate it, or whether it is in some finely-disseminated associated mineral, which can not easily be saved. If this crude experiment gives favorable results, you may feel sure that the use of proper machinery and skill would make them still more favorable. Unfavorable results, of the kind we have indicated above, would not be, under all circumstances, absolutely decisive against any attempt at concentration, even though they indicate that you would lose in that way the larger part of the value of the ore. Sometimes a man is willing to throw away two dollars that he may realize one dollar. This may happen when the ore is very rich, or when the man is very poor; and when both these conditions occur together, the temptation to sacrifice science for cash is usually overpowering. High rates of transportation are the most frequent elements in such coercion: and the choice of the miner, if fate leaves him any choice, must be determined by a calculation in which the art of ore-dressing alone is not decisive. *

NOTES ON GOLD-MILL CONSTRUCTION.*

By Augustus J. Bowie, Jr.

WITH TWO SUPPLEMENTS.

The discovery of the auriferous cement gravel deposits in and near Deadwood Gulch, Lawrence County, Dakota Territory, in 1876, created a mining excitement and rush to the Black Hills. Numerous ten and twenty-stamp mills were built on Deadwood Gulch. Central City and the town of Deadwood sprang into existence, and became the centers of the mining industry of the Hills.

Gold quartz deposits were subsequently discovered and located on a so-called mineral belt, extending from Whitewood Creek on the south to Deadwood Gulch on the north. A northerly group of these quartz locations was purchased in December, 1877, by parties in San Francisco, who formed a company, incorporated under the name of the Father de Smet Consolidated Gold Mining Company. This company immediately commenced the work of exploration. The deposits were proved to be extensive and easily mined; but it was found that the ore, on an average, would not yield more than $10 per ton† of 2000 pounds.

At this time, the cost of supplies and material in the Hills was high. Miners' wages were $3.50 per diem, and custom mills charged $6 per ton. The successful working of mines on "the belt" necessitated cheap milling, which could only be accomplished with large and economically running mills.‡

To insure the greatest possible economy, the Father de Smet mill (which was designed and constructed under the immediate supervision of the writer) was built on a plan different, in some respects, from any hitherto erected. The machinery, while of the most approved construction, did not vary essentially from that of other mills; but the arrangement of the building was novel, to a great extent, and has since proved so excellent economically, that a detailed description of it may be of interest to many. The special objects in view were:

1st. The constant supervision of the batteries, tables, and sluices, and consequent safeguard against robbery.

2d. Free access to all parts of the machinery, and room for handling the same.

3d. Very large ore-bin capacity, to insure steady milling.

4th. The least possible manipulation of the material in all stages of reduction.

Among the results attained by this construction of the mill, besides those hereafter mentioned, the following may be briefly noted here. The building has been thoroughly tested, and at times there have been one and a half million pounds of ore in the bins without any resulting damage or straining of the structure. The rock-breakers, which are fifty-three feet above the battery floor, have been run to their full capacity, with the whole mill in operation, without causing much, if any, vibration in the building, or even on the car-track in the top of the main division. An exceedingly limited number of employés in the mill is requisite, namely: 1 head amalgamator; 3 assistant amalgamators; 2 feeder tenders; 1 chief-engineer and mechanic; 2 assistant engineers; 1 fireman; 5 rock-breaker men; 1 watchman; 1 carpenter; 1 blacksmith. Total number required per diem to run the mill to full capacity, 18.

THE FATHER DE SMET GOLD MILL.

The ground for the Father de Smet eighty-stamp gold mill was broken

* A paper read at the Virginia Meeting of the American Institute of Mining Engineers, May, 1881. From the Transactions of the Institute.

† Up to December 31st, 1879, the De Smet mine had produced bullion of the value of $718,211.63 from 76,155 tons of ore, being an average value of $9.41 per ton. During the year ended December 31st, 1879, the mine produced 46,344 tons, which yielded $425,360.42, or $9.18 per ton. The total gross cost of working for the corresponding period, including dead-work, exchange, legal expenses, etc., was $219,914.82. The yield of the mine for the year 1880 (ENGINEERING AND MINING JOURNAL, February 5th, 1881) was $600,011, with total expenses of mining and milling of $313,108.

‡ The first 4083 tons extracted from the De Smet mine were selected, yielding $62,783.97. The next 25,728 tons produced $ 30,067.24. The total 29,811 tons were weighed, and worked at custom mills. The yield of the first 400 tons from the Golden Terra mine was $11.44 per ton.

about the first week of June, 1878. The site selected was on the side-hill, some 600 feet northeast of the Justice shaft of the De Smet mine, at a point 400 feet below the mouth of the shaft, and at an elevation of 30 feet above the bed of Deadwood Gulch. A space 200 feet in length by 80 feet in width was excavated, trenches and bits for batteries and machinery duly prepared, and the building erected on the solid slate country-rock. The material from the excavation was dumped over the hill-side, so as to form, in front of the mill, a large area, which was subsequently used for a wood-yard and for other purposes. By reference to the accompanying drawings (SUPPLEMENT, Plates I. and II.), the following description of the construction and arrangement of the mill may be readily understood.

The Building.—The entire structure, which faces the north, covers a space 140 feet long and 60 feet wide. The elevation of the main building, from the mud-sills to the apex of the roof, is 75 feet. Its greatest length is east and west. It was constructed with three distinct compartments, which, for purposes of description, will be designated as the east division, main building, and west division. The east division is 52 feet long and 60 feet wide, and contains the engine, boiler, machine and lathe rooms. The machine-shop is well supplied with all the necessary implements for mill work. The lathe is 30 inches × 23 feet, and fitted with a full complement of tools. The main or center division, 68 × 60 feet, contains the batteries, rock-breakers, and ore-bins. The west division, 20 × 60 feet, is used for the clean-up room and repair-shop. It contains a small cast-iron clean up pan, tubs for panning out amalgam, tailings, etc. The accompanying plans show that the construction of the end divisions is quite simple, and a description of the same will, therefore, be omitted.

Materials.—The timber used in the construction of the building was the best available pine found in the hills. The mud-sills were hewn timbers, and the posts, beams, caps, and rafters were of sawed lumber. The timber for the cross-beams came in lengths of 30 feet, which were extended by fishing and scarfing as required. The shingles, laid 4 inches to the weather, were such as could be obtained, heart shingles being, of course, desired. All the mortises and tenons were carefully cut and accurately fitted.

The Main Floor.—The main building is erected on right lines of mud-sills, each line being 71 feet long. The sill timbers are of different lengths, 18 × 24 inches in width and thickness. Those on the outer lines of the mud-sills are securely lock-spliced together. The cross sills are 12 × 21 inches and 62 feet long, bolted to the mud-sills with 1-inch iron bolts, 96 bolts in all being used for this purpose. The sills are laid on the solid bed-rock, and grouted with lime. Due precaution was taken to insure a perfect foundation, all weak places being dug out and filled in with masonry. The ground or battery floor is double planked, carefully laid with a pitch from the batteries to the center line of the building, along which line, under the floor, run two sluices, one for each half of the mill, receiving the tailings as discharged from the plates. These two sluices incline toward one another, meet in the center of the building, and discharge their contents into a quicksilver trap placed at their junction. The trap discharges into a sluice, which runs at right angles to the sluices already mentioned, and in turn discharges into a second quicksilver trap, after passing which the tailings flow into the gulch.

Engines, Boilers, and Shafting.—The machinery of the mill was constructed at the Union Iron-Works, San Francisco, Cal. The engine was made sufficiently large to drive the present eighty stamps, and twenty additional, should the latter be required.* It is a horizontal engine, fitted with Meyers's cut-off, known as size No. 5. The cylinder is 20-inch diameter with 42-inch stroke. The engine occupies a space of 5 feet × 21 feet 6 inches. The height from base to center is 24 inches. The shaft is 9 inches in diameter. The whole weight of the engine is 25,000 pounds. The balance-wheel is 18 inches in diameter, cast in eight segments,† and weighs 1900 pounds. There are two boilers 54 inches in diameter, 16 inches long. The shells are $\frac{5}{16}$ foot and the heads $\frac{7}{16}$ inch thick. Each boiler contains forty-six tubes, 3½ inches in diameter, spaced 4½ inches in vertical rows. The tubes are securely fitted in the boiler with an expanding mandril, and their ends beaded over. There are two man-holes; at one end above, and at the other below the tubes. To the top of the boiler is riveted a 6-inch diameter chock with a 54-inch circle, and to this is bolted a 6-inch safety-valve, fitted with brass valves, complete with lever and ball. A 6-inch flange is also bolted to the same for the steam-pipe. Each boiler is provided with a water-gauge fitted to its front with circulating pipes, and three gauge-cocks tapped in the front end. There is a steam-gauge 8-inch face with siphon and cocks, and one 6-inch steam whistle with 2-inch cocks. The steam-drum, 40 inches in diameter and 12 feet long, is connected with the boilers by two chocks 8-inch diameter and 40-inch circle. The drum is provided with a man-hole on one end. A mud-drum, 24 inches in diameter, and 14-foot long shell (A. C. iron), ¼ inch thick, heads $\frac{5}{16}$, provided with a man-hole on left end, is connected with the rear end of boilers by two chocks 8-inch diameter and 24-inch circles. On the under side of the mud-drum there is bolted a 4-inch diameter blow off elbow with a 4-inch diameter mud-valve attached. The best No. 1 A. C. brand iron was used in the boilers, steam and mud-drum, and the iron rolled to show the brand on the outside. The horizontal seams of the shells were double riveted, and the rivets spaced to government standard and driven by hand. The edges of plates for the boiler, steam, and mud-drums were beveled on a planer before being rolled, and calked inside and outside. There is a double fire-front of cast-iron 1 inch thick, 12 feet long, 6 feet 6 inches high, with a molding around the edges. It is spaced to leave 4 inches between the boilers, and made with carrying brackets to hold the boilers and cover the heads of the rivets, leaving the boiler-heads flush with the fronts. It is fitted with fire and ash-pit doors. The front plate consists of three pieces of wrought-iron, one ½ inch × 6 inches × 12 feet, and the other two ¾ inch × 2½ inches × 6 feet, to suit the fronts. The boilers are supported by two boiler-stands, 18 inches base and 18 inches high, one back bearer 1 inch × 6 inches × 11 feet, two wrought-iron hollow arches, and one arch brace 1 inch × 8 inches × 10 feet, one inclosed in double walls of brick, so constructed as to form an air-chamber. There is an iron tubular heater, 24 inches in diameter, and 8 feet 7 inches long, front face to face of flanges. The shell is of $\frac{5}{16}$-inch iron, fitted with cast-iron heads 3½ inches deep, and covers bolted to the same. The holes are tapped in each end for 2-inch gas-pipe. The heater contains 24 tubes 2½ inches in diameter, and 8 feet long. Two chocks, 8-inch diameter, with 16-inch flanges, are riveted to the heater 15 inches from each end, at right angles from each other. A flange 16-inch diameter, for an 8-inch galvanized iron pipe, is bolted to the outlet chock. A 1-inch drain-cock is fitted to the bottom side of the heater, opposite and under the outlet chock.

To supply the boilers, and for other purposes, there is a No. 5 Knowles steam-pump. The engine is placed on a stone foundation set in hydraulic cement, the bed-rock being excavated for this purpose. The anchor bolts are 11 feet long.

The main shaft and driving-pulleys are situated in the center of the east end of the main building. The pulleys (96-inch diameter), by means of six-ply rubber belts, drive 54-inch pulleys on the line shafting, and eight other pulleys, also 54 inches in diameter; on this line of shafting are bolted two 72-inch pulleys on the cam-shafts. The cam-shaft belts are provided with tightener pulleys 15 × 16 inches in size. There are two lines of line shafting, one on each side of the main building, placed behind the batteries, and directly on the battery-sills, the head ends being supported on pillow-blocks. The machinery and line shafting are so placed as to be readily accessible.

The Batteries.—The batteries, sixteen in number, with five stamps each, are arranged in two lines, eight batteries on each side of the mill. They discharge to the center of the main building. They are of the usual style, built independently of the building, and braced, one line against the other, with 12 × 18-inch timber, as shown in the plan. The battery blocks are of selected 2-inch planks, spiked together, broken jointed, standing on their ends, clamped longitudinally and bolted. It was difficult to obtain sound timber of sufficient size to make the blocks in the ordinary way, and recourse was had to the style of block above described. Experience has demonstrated that this style of block is excellent, if not the best. Sound planks can be selected and put together, thus insuring a perfect material upon which to rest the mortars, a result not always secured when large timbers are used. The blocks are placed in pits 12 feet deep, sunk in the slate. The bottoms of the pits are leveled with a few inches of quartz sand, and the blocks are placed in position and securely clamped; quartz tailings are then run in, filling up the remaining spaces between the blocks and the slate. Each stamp weighs 758 pounds, and consists of:

1 stem, 13 feet long by 3¼ inches in diameter, weighing 320 pounds.							
1 tappet, diameter of face, 9½ inches; depth, 10 inches; weight, 100 pounds.							
1 boss head,	"	"	8½	"	"	16	"	"	214	"
1 shoe,	"	"	8½	"	"	9	"	"	124	"

The die is 8½ inches in diameter and 5½ inches deep: weight, 89 pounds.

The tappets are set to drop the stamps from 7 inches to 9½ inches, eighty-five drops per minute being the calculated speed. The cam-shafts are 5 inches in diameter in lengths of 14 feet 6 inches each, weighing 860 pounds.

Mortars, Shoes, and Dies.—The mortars are of the gold-mill pattern, with lining for sides and ends. The frame and lining weigh about 4900 pounds each. The accompanying drawing (*see* SUPPLEMENT) shows their construction in detail. They are set on the blocks and bolted to them, the tops of the blocks being previously covered with blankets. The groove shown in the center of the bottom of the mortar was made for the purpose of holding the die to its place, each die being cast with a corresponding lug. As the dies wore down, it was intended to introduce a false bottom, or heavy casting, 3 inches thick, filling the bottom of the mortar, and provided with a lug for the groove in the mortar, and a groove in the top for the lug on the die. The object in view was to economize iron by wearing the dies as thin as possible without lowering too much the level of their surface. The screens used are No. 6 punched; size, 14 × 52 inches. Experience has since shown that, with the frequent introductions of dies, the sides of the grooves chip, and the dies then require wedging. It has been further demonstrated at the mill that, when old dies were worked down on the false bottoms, the batteries by no means crushed as much rock as with new shoes and dies, though the line of discharge was kept relatively the same. This is accounted for by the irregular wear and tear of the shoes and dies, and the loss of weight. A very important question in milling low-grade gold quartz is here presented, where economy requires that the largest possible quantity should be treated at the smallest possible cost in the shortest time, with due reference to the percentage of yield.

The conclusions so far arrived at are:

1st. That the square bottom is the best form of die.

2d. That there is no economy in using dies after their surfaces have been irregularly worn to any great extent.

In milling gold quartz, almost the principal expense is the consumption of shoes and dies, any method by which a saving can be effected here is most desirable. If the above conclusions are correct, it is economy to cast shoes and dies with the smallest depth practicable. This necessitates at least monthly replacing, but it insures the largest amount of work per stamp with the smallest consumption of iron. In addition, it is estimated that the quantity crushed with new shoes and dies is so much in excess of that with those which are much worn as to well repay frequent renewal.

Feeders, Tables, and Traps.—Immediately over the shafting on each side of the mill is the feeder-floor. This floor is spacious and well lighted. There are sixteen of Hendy's patent self-feeders, eight on each side. They stand immediately back of the batteries, the lip of the feeder being on a line with the mortar-feed, and the mouth of the hopper of the feeder being directly under the ore-bin discharge. The batteries, sixteen in number, with five stamps each, are arranged in two lines, eight batteries on each side of the mill. In front of each battery there is an inclined table covered with amalgamated soft copper plates. The tables are so located that they are all visible from any one point on the main floor of the mill, and are thus constantly under the supervision of the amalgamators. At

* The lumber for this addition was purchased in 1879. Two more boilers will be required if the twenty stamps are added. This change will necessitate detaching the west division from the main structure, and shifting it about twenty feet farther west.

† Weight of eight segments, 14,360 pounds. Fly-wheel, center, and follower, 1320 pounds.

the lower end of each table there is a Eureka rubber,* which receives the tailings and in turn discharges them into a quicksilver trap. From the trap, the tailings pass over a small amalgamated copper plate placed below the floor and thence run into the sluice previously described, situated in the center of the mill. The traps are narrow wooden boxes with a center partition which extends to within a few inches of the bottom. The boxes are lined with movable amalgamated copper plates. Above the main sluice, on a level with the floor, there is a track on which runs a small car, used to transport material as may be required.

Rock-Breakers and Grizzlies.—The rock-breakers, two in number, Blake's patent, 15 × 9 inches in size, placed immediately over the center of the apex of the shoot are set on timbers laid longitudinally with the building on top of the upper tie beams, to which they are bolted with 1-inch bolts. They are driven with 10-inch belts from pulleys on the counter-shaft, which is run with a 16-inch belt from a 66-inch pulley on the south line shaft. The mouth of each breaker is set on a level with a raised floor (on the upper tie beam), which is covered with wrought-iron plates upon which the ore descends from the grizzlies. The monthly capacity† of the mill was originally from 4400 to 5400 tons of quartz. Two additional rock-breakers have since been added, and the capacity of the mill has been increased to 6200 tons of quartz, and to a much greater amount (7500 tons) when the auriferous slate is also milled, which now being done. It has been conclusively proved in the Black Hills that in milling low-grade quartz, there is great economy in large rock-breaker capacity. The breakers should be set to crush fine. Each rock-breaker is supplied with ore fed over two grizzlies (one on each side of the breaker). The grizzlies, 4½ feet wide by 12 feet long, are set on an incline of 42°, and extend from the rock-breaker floor to the car-way which runs along the top of the mill. Each grizzly is composed of twenty-four bars of iron, 1 inch × 2 inches × 12 feet, set with spaces of 1¼ inch between the bars. The total weight of the four grizzlies is 8160 pounds. The car-way in the main building connects with a tramway, which passes over the top of the west division, as may be seen in the plan, and extends to a self-acting elevator placed at the mouth of the lower tunnel of the mine.

Water Supply.—Water for the batteries is supplied from a 20,000-gallon tank inclosed in a room built against the south side of the main building. In the tank is a large sheet-iron drum, through which the exhaust steam from the engine is passed to heat the water. The temperature in the hills during the winter ranges from 0° to – 35° F. From this tank, 2½-inch pipes distribute the water throughout the mill. Between every set of two batteries for use on the tables is attached to the water-pipe a 1-inch hose with nozzle. The boilers are supplied from a 15,000-gallon tank placed behind the engine-room. Immediately above the mill on the hillside there is a tank containing 48,000 gallons of water, for use in case of fire. As a protection against fire, a 2½-inch hose is always kept attached to a fire-plug in the boiler-room. On the rock-breaker floor, there is a fire-plug with hose attached. Water is delivered at this point by a direct connection with the 6-inch main of the Central City Water Company. There are two fire-plugs outside of the building supplied from the same source under a steady pressure of 100 feet, which, in case of need, could be increased to 400 feet. In front of the mill are the mill blacksmith shop, assay-office, retort, and smelting-rooms, all of which places are fitted with every necessary appointment for their respective work.

Cost of Construction.—The cost of the construction of the mill was as follows:

Mill lumber	$13,706.61	
Shingles	378.00	
Masonry	636.75	
Cement	82.50	
Hauling	705.00	
Planing-mill	850.00	
Lime	207.70	
Miscellaneous	367.00	$16,933.56
Whitewashing	359.15	
Copper	1,109.15	
Quicksilver	414.10	
Belting	952.47	
Fire-arms	68.30	
Telegraph	44.60	
Toll-Gate Company	74.55	3,022.32
Hardware	5,603.27	
Nails	886.33	
Machinery, including lathe	35,566.73	
Freight	24,075.42	66,131.75
Total		$86,087.63
Deduct supplies on hand		13,060.07
Actual cost of all material and machinery		$73,027.56
Contract on construction	15,000.00	
Labor on pits, tank (48,000 gallons), mill, etc	4,652.44	19,652.44
Total cost of mill construction and material		$92,680.00
TRAMWAY.		
Lumber and shingles	$1,528 00	
Labor	1,333.00	
Survey	87.00	
Sundries	188.00	3,136.00
GRADING MILL-SITE.		
Labor, material, tools, etc		4,939.48
Grand total		$100,755.48

During the census year, 25 coal mines in Colorado, having an estimated capacity of 638,233 short tons, produced 462,747 tons, valued at $1,041,350. Wages to the amount of $714,715 were paid to 1434 employés, and the capital invested was $5,939,250, of which $5,448,100 is given as estimated value of real estate.

* These rubbers were taken out subsequently and replaced by amalgamated soft copper plates. The cost of running the rubbers and the small amount saved by them did not justify their use. Moreover, the quantity of material crushed per battery was too much for the single rubber to work. The results were, that the rubbers became virtually useless, and the grinding entailed loss in quicksilver. From August, 1879, to April, 1880, inclusive (nine months), in working 48,422 tons of ore, there was a loss of 928 pounds of quicksilver, or very nearly 3-10 of an ounce of quicksilver to the ton of ore worked. This was after the rubbers had been taken out. In the accompanying drawings, the "plan" shows the mill as it now is; and the "cross section through the main building," the mill with the Eureka rubbers as originally erected.

† The ore is estimated per car-load.

THE PRODUCTION OF BESSEMER STEEL IN 1881.

We have received, says the *Bulletin*, complete statistical reports from all the Bessemer steel-works in the United States, giving their production of ingots and rails in 1881.

The total quantity of Bessemer steel ingots produced in the United States in 1881 was 1,539,157 net tons, or 1,374,247 gross tons. The production in 1880 was 1,203,173 net tons; in 1879, 928,972 net tons; in 1878, 732,226 net tons. The increased production of 1881 over 1880 was 335,984 net tons, or 28 per cent; over 1879 it was 610,185 net tons, or 66 per cent; and over 1878 it was 806,931 net tons, or 110 per cent. The production of Bessemer steel ingots in this country in the ten years from 1872 to 1881 has been as follows, in net tons:

Years.	Net tons.	Years.	Net tons
1872	120,108	1877	560,587
1873	170,652	1878	732,226
1874	191,933	1879	928,972
1875	375,517	1880	1,203,173
1876	525,996	1881	1,539,157

Bessemer steel ingots were produced in 1881 by 13 works, of which 7 are in Pennsylvania. Two new works, both in Pennsylvania, produced Bessemer steel in 1881 for the first time. These works are those of the Pittsburg Bessemer Steel Company, Limited, located at Homestead, near Pittsburg, having two converters, and the Pittsburg Steel Casting Company, of Pittsburg, having but one converter. The Pittsburg Bessemer Steel Company, Limited, made its first blow on March 19th, 1881, and the Pittsburg Steel Casting Company made its first blow on August 26th, 1881. Some extensions were made to the old works in 1881, and two new works are in course of erection now. A comprehensive exhibit of the Bessemer steel works of the country completed and in progress is as follows:

Names of Companies.	Converters. Completed.	Converters. Building.
Albany & Rensselaer Iron and Steel Company, Troy	two 6¼-ton	
Bethlehem Iron Company, Bethlehem	four 7-ton	
Pennsylvania Steel Company, Steelton	two 6½-ton, three 8-ton	
Lackawanna Iron and Coal Company, Scranton	two 7½-ton	
Cambria Iron Company, Johnstown	two 6-ton	
Carnegie Brothers & Company (Limited), Bessemer	three 10-ton	
Pittsburg Bessemer Steel Compay (Limited), Homestead	two 4-ton	
Pittsburg Steel Casting Company, Pittsburg	one 7-ton	
Cleveland Rolling-Mill Company, Cleveland	two 6¼-ton	
North Chicago Rolling-Mill Company, Chicago	two 6¾-ton	two 10-ton
Union Iron and Steel Company, Chicago	two 5½-ton	
Joliet Steel Company, Joliet	two 5½-ton	
Vulcan Steel Company, St. Louis	two 6¼-ton	
Scranton Steel Company, Scranton		two 4-ton
Colorado Coal and Iron Company, South Pueblo		two 5-ton
Total	31	6

Only 30 converters were in use in 1881, as Carnegie Brothers & Co. (Limited) have substituted a 3-converter plant since the close of the year for their 2-converter plant. The new works at Scranton, Pa., and South Pueblo, Colorado, and the extension of the North Chicago Rolling-Mill Company's works will probably be in operation some time during the first half of 1882.

The American producers of Bessemer steel rolled 1,253,129 net tons, or 1,118,865 gross tons, of Bessemer steel rails in 1881. But this is not the whole quantity of Bessemer steel rails rolled in the United States in that year, as quite a large quantity, estimated in the neighborhood of 100,000 gross tons, was rolled by iron rail mills from imported blooms. The total production of Bessemer steel rails in 1881 was therefore about 1,200,000 gross tons, as we some time ago estimated it would be, but the exact figures can not be given until we receive full statistical reports from the iron rail mills of the country. The following table shows the growth of our production of Bessemer steel rails in the ten years since 1872, the qualifying statement in regard to 1881 being borne in mind:

Years.	Net tons.	Years.	Net tons.
1872	94,070	1877	452,169
1873	129,015	1878	550,398
1874	144,944	1879	683,964
1875	290,063	1880	954,460
1876	412,461	1881	1,365,129

THE BASIC PROCESS IN GERMANY.

At the last meeting of the Iron and Steel Institute of Germany, held at Düsseldorf, Director Brauns, of the Dortmund Union Steel-Works, read a paper on the Economical Aspects of the Thomas-Gilchrist Process in Germany. The author stated that the process had been worked regularly at the Union works since May last, and that tests were made on a sample from every charge. The experience gained in this way confirmed that obtained by the Rhenish, Hörde, and other works, that there was no difficulty in obtaining uniformly good work as regularly as with ordinary Bessemer steel. They had, moreover, demonstrated that the Thomas steel presented special advantages for the manufacture of railroad sleepers, plates, soft steel for wire, etc., even where local circumstances were such as to enable hematite steel to be made as cheaply as dephosphorized steel. The result was, that this dephosphorized ingot iron would for very many purposes take the place of puddled iron, and that much of the iron that was now imported into Germany for ship plates and other uses would be replaced by the cheaper and better dephosphorized steel manufactured in Germany. The difficulty of obtaining suitable iron to treat by the basic process had been greatly exaggerated. Experience showed that not only by reason of its being possible to use phosphoric ores, but in every other respect, the manufacture of a suitable basic pig was far easier and cheaper than the manufacture of ordinary Bessemer iron. It was found that the output of a blast-furnace on Thomas-Gilchrist pig-iron would exceed by from 25 to 30 per cent the production of a blast-furnace on Bessemer pig; while the campaign of the furnace working on the latter would be much shorter. White iron is generally preferred to gray iron, and the phosphorus may with advantage be kept between 1¼ and 1½ per cent. The ore districts of Germany that would most benefit by the Thomas-Gilchrist process are Lorraine, Luxemburg, the brown ore region of Bonn,

and the black band region of Dortmund; the Ilsede and Upper Silesian and Bavarian works would also be largely benefited. In the discussion that followed, Director Grass stated that his works found the extra costs on the Thomas-Gilchrist process to be $1.68 a ton. This would make the Thomas-Bessemer steel about $3.12 a ton cheaper than hematite Bessemer steel in Germany, where phosphoric iron is at least $4.86 a ton cheaper than Bessemer iron.

METALLIC SCALES.

Written for the Engineering and Mining Journal by F. A. Lowe, M.E., Batopilas, Chihuahua

In using the metric system in assaying ores carrying native silver or metallic scales, the following method will be found to be simple and expeditious. It is based upon the value, per ton, in ounces, of 1 milligram of metallic scales in 1 gram of ore=29·166 ounces per ton.

To find approximately the metallic scales, per ton, from any amount of ore taken as a sample, divide the whole weight of the sample taken into 29·166, and multiply the quotient by the weight (in milligrams) of the metallic scales cupelled.

Example.

Weight of sample taken, 400 grams.
29·166÷400=0·07291.

Assay value of siftings per ton	300·00 ounces.
Weight of metallic scales cupelled=500 milligrams; hence 500×0·07291	=34·45 "
Total value per ton of such samples	334·45 "

As 100 grams from any well-sampled sample is the most convenient amount on which to base the approximate value per ton, by simply dividing the weight, in milligrams, of the metallic scales cupelled, by 3·427, and adding the quotient to the assay value of the siftings, the same result will be obtained as when 100 grams is multiplied by 0·29166, and the result added to the siftings.

Examples.—First Method.

Weight of sample, 100 grams.
29·166÷100=0·29166.

Assay value of siftings per ton	200·0 ounces.
Weight of metallic scales cupelled=500 milligrams; hence 500×0·29166	=145·8 "
Total value per ton of such samples	345·8 "

Second Method.

Weight of sample, 100 grams.

Assay value of siftings per ton	200·0 ounces.
Weight of metallic scales cupelled=500 milligrams; hence 500÷3·427	=145·8 "
Total value per ton of such samples	345·8 "

3·427 is the weight, in milligrams, of metallic scales, corresponding to 1 ounce per ton, obtained from 100 grams as a sample. To determine approximately the whole amount of silver, in milligrams, in a sample, divide the assay amount, usually $\frac{1}{10}$ assay ton for silver ores, into the whole weight of sample minus weight of metallic scales cupelled, and multiply the quotient by the weight of button obtained from the siftings; then add weight of metallic scales cupelled.

Example.

	Milligrams.
Weight of sample, 1 kilogram	=1,000,000
Weight of metallic scales cupelled	1,000
1,000,000−1000÷2916	= 342·5
Weight of button obtained from 0·1 assay ton	50
Then 342·5×50=total amount of silver in the siftings	= 17,125
Total amount of silver in the sample, 17,125÷1000. or ·58 ounce troy.	= 18,125

Remembering that 31·17 grams equal 1 ounce troy, and 28·40 grams equal 1 ounce avoirdupois, any weight avoirdupois can be easily reduced to the metrical system and the whole amount of silver to troy ounces.

ARIZONA RAILROADS.

A pamphlet recently issued by authority of the Legislature of Arizona in reference to the resources of that territory contains the following in regard to its railroads: The completion of the Southern Pacific Railroad across Arizona marks a new era in the history of the territory. The Southern Pacific enters Arizona at Yuma, and crosses the territory between the thirty-second and thirty-third degrees of latitude. Its length within the boundaries of Arizona is over 400 miles. Since the building of the road, many towns and mining camps have sprung up in the country adjacent. At Deming, in New Mexico, about 90 miles east of the Arizona line, another great transcontinental route, the Atchison, Topeka & Santa Fé Railroad, forms a junction with the Southern Pacific. From Deming, the Atchison, Topeka & Santa Fé Company has its road surveyed to Tombstone and Tucson, where it is expected it will connect with the branch which is now building from Guaymas, through the State of Sonora. The opening of this thoroughfare will give Southern Arizona direct rail connection with the Gulf of California, as its junction at Deming with the Southern Pacific has already linked it with the Mississippi valley and the Atlantic seaboard. Among the branch roads projected from the line of the Southern Pacific is that from Benson station to the city of Tombstone, a distance of 28 miles. Ground has been broken for this branch, and it will be finished at an early day. A branch has also been surveyed from Wilcox to the town of Globe. The length of this proposed line will be something over 100 miles. It will pass through one of the best grazing portions of the territory, by the lately discovered coal-fields near the Gila, and will open up to capital and immigration that mineral region which has Globe for its center.

Another branch line is in contemplation from Casa Grande station to Pinal, by way of Florence. It will pass through the valley of the Gila and penetrate the mineral region embraced in the Pioneer, Pinal, Mineral Creek, and other districts of Pinal County.

The Southern Pacific Company has surveyed a line from Yuma to Point Isabel, on the Gulf of California. A good harbor is said to exist at that place. The building of this branch will give the territory another outlet to tidewater on the gulf. A line has also been surveyed from Yuma to the mining camps of Castle Dome and Silver District, on the Colorado River. The Southern Pacific is now completed to Marifa, 195 miles east of El Paso.

In the northern part of the territory, the construction of the Atlantic & Pacific Railroad is making rapid progress. This road leaves the Atchison, Topeka & Santa Fé at Albuquerque, and takes a westward course across the territory, following nearly the thirty-fifth parallel of north latitude. The road will pass about 50 miles north of Prescott, the capital of Arizona, and will cross the Rio Colorado at the Needles. This road will have termini at San Francisco and San Diego. A franchise has been granted by the last legislature to build a branch from Prescott to the Atlantic and Pacific. The distance, as has been before stated, will be about 50 miles, most of the way over a smooth, rolling country. The extensive mining, farming, and grazing interests, of which Prescott is the natural center, require the construction of such a road, and it will, no doubt, be completed within a short time. Besides the roads now building and those projected, which have been mentioned, the Utah Southern is pushing down to the Colorado River, with the intention, as is generally supposed, of seeking an outlet on the Gulf of California. This would give Arizona a connection with the Union Pacific and another route to the East and West.

PROGRESS IN SCIENCE AND THE ARTS.

Electricity in the Metallurgy of Zinc.—In a paper read before the French Society of Civil Engineers, M. L. Létrange comes forward as the inventor of a new process of obtaining zinc from its ores by electro-metallurgy. He roasts blende partially and dissolves the sulphate of zinc deposits with the aid of the electric current, and uses the solution to dissolve fresh quantities of zinc. It does not appear from M. Létrange's paper that he has tried the process on a working scale.

Ship-Building in England in 1881.—It is estimated that close upon one million tons have been built in England during the year. The returns already received give 338,960 tons for the Clyde, 177,165 tons for the Tyne, 156,415 tons for the Wear, 32,700 tons for Barrow, 18,945 tons for Dundee, 56,541 tons for the Hartlepools, and 58,565 tons for the Tees. The marine losses during the year were so very heavy that it is stated in some quarters that they were not far behind the new vessels in tonnage.

Analysis of Hiddenite.—The *American Journal of Science and Arts* prints the following analysis made by Dr. Genth, of the green spodumene which is mined in Alexandria County, North Carolina:

Silica	63·95	per cent
Alumina	26·58	"
Chromic acid	0·18	"
Protoxide of iron	1·11	"
Lithia	6·82	"
Soda	1·54	"
Potash	0·07	"
Total	100·25	"

The presence of a small quantity of chromium is interesting as bearing upon the question as to cause of the color to which this variety of spodumene owes its beauty.

A New Magneto-Electric Exploder.—M. Marcel Deprez, the eminent French electrician, has constructed a new magneto-electric machine for exploding mines and torpedoes, which possesses several points of interest. Instead of passing the instantaneous current induced in the coiled armature suddenly snatched from the poles of the magnet, directly through the wires to the fuse in the mine, he passes it through the primary circuit of an induction coil, and the secondary spark from this coil is sent along the wires to explode the mine. This change, says *Engineering*, necessitates some modification in the exploder as ordinarily made. For instance, the wire of the armature coil ought to be thick, so as to give small resistance, and the induced current due to the withdrawal of the armature should be broken when at its maximum strength, in order that the rupture may induce a maximum current in the secondary circuit of the induction coil. M. Deprez also found that ordinarily the armatures of exploders contained too much iron, and he has therefore reduced this feature. In the new exploder of M. Deprez, the armature consists of a coil of stout wire wound on a core of sheet-iron, which is carried by two crank-levers mounted on the same axle. By striking a small pedal attached to the other arms of these levers, the armature is suddenly jerked away from the poles of the horseshoe permanent magnet it rests against, and the spark generated flows into the primary of the induction coil. The interrupter of the latter is to be adjusted so as to give the longest spark from the secondary.

The Scranton Mineral.—The peculiar coal-like substance found at Scranton has attracted considerable attention, and two papers on the subject have recently been read before scientific societies, the first, by Prof. H. C. Lewis, before the Philadelphia Philosophical Society; and the second, by Prof. H. L. Fairchild, before the New York Academy of Sciences. Mr. Lewis states that the substance, when dried, is brittle, has a conchoidal fracture and brilliant luster, and closely resembles jet. It is nearly insoluble in alcohol and ether, but is entirely soluble in caustic potash, forming a deep reddish-brown solution, from whence it can be again precipitated on the addition of an acid. It has a specific gravity of 1·032, and burns with a bright flame. After having been dried at 212°, it has the following composition, according to the analysis of J. M. Stinson:

		Or without ash.	
Carbon	28·989	Carbon	30·971
Hydrogen	5·172	Hydrogen	5·526
Nitrogen	2·456	Oxygen and nitrogen	63·503
Oxygen	56·983		100·000
Ash	6·400		
	100·000		

yielding the empirical formula $C_{10}H_{23}O_{16}$.

Mr. Lewis purposes to group all the minerals of this class, produced by the decomposition of vegetable matter, under the one generic name of *Phytocollite*.

Professor Fairchild in his paper says: "Mr. N. L. Britton, Geological Assistant at the School of Mines, New York, has made approximate analyses of this altered peat, from material which I carefully selected;

also of the peat contiguous to the transformed matter (within the distance of an inch); and of the ripe peat from a depth of 13 feet in another part of the excavation. The analyses are of thoroughly and equally dried samples, and afford the following percentages:

	Moisture at 115° Cent.	Volatile matter.	Fixed carbon.	Ash.
1. Ripe peat	6·225	63·875	4·625	25·275
2. Peat adjacent to 3	3·775	22·125	4·625	69·475
3. Transformed peat	11.350	52·800	24·725	11·125
4. Transformed peat	66·758	9·826	4·012	19·404

Number 4 is by the Pennsylvania State Chemist, as published in the *American Journal of Science*. The moisture is taken at 212° Fahr., and the analysis is evidently of the fresh material.

To obtain a fairer comparison, and if not strictly accurate, yet sufficiently so for our purpose, I have computed the percentages with the moisture eliminated.

	Volatile matter.	Fixed carbon.	Ash.
1. Ripe peat	68·115	4·932	26·953 (White)
2. Adjacent to 3	22·993	4·806	72·201 (White)
3. Transformed peat	59·560	27·891	12·549 (Pink)
4. " (State Chemist)	29·559	12·069	58 372
Bituminous coals	30 to 60	40 to 70	3 to 6

From this table, says Professor Fairchild, it will be seen that the composition of the transformed peat, No. 3, is about that of a very "fat" bituminous coal; that is, one containing a large proportion of volatile combustible matter, such as is desired for making gas. In No. 4, the volatile matter and the fixed carbon have nearly the same proportion to each other.

In the discussion which followed the reading of this paper, Prof. A. A. Julien urged that the only mode of examination which could throw light upon the character of the Scranton substance would be a determination of its proximate constituents, a very difficult method.

IMPORTING ATMOSPHERIC AIR.—A Berlin newspaper relates an amusing story of the famous German scientist, Alexander von Humboldt, who took advantage of the exemption from duty of the covering of articles free from duty, formerly the rule in France. In the year 1805 he and Guy-Lussac were in Paris engaged in their experiments on the compression of air. The two scientists found themselves in need of a large number of glass tubes. This article was exceedingly dear in France at the time, and the rate of impost upon imported glass tubes was something alarming. Humboldt sent an order to Germany for the needed articles, and gave directions that the manufacturer should seal up the tubes at both ends, and put a label upon each tube with the words *Deutsche Luft* ("German air"). The air of Germany was an article upon which there was no duty, and the tubes were passed by the custom officers without any demand, and arrived free of duty in the hands of the two experimenters.

GENERAL MINING NEWS.

ARIZONA.

COPPER QUEEN.—It is stated that this mine will shortly pass into the hands of an English syndicate, whose agents examined the property a short time ago.

TOMBSTONE DISTRICT.

The trial of the case of the Contention *versus* the Head Center was finished on the 28th ult. by the return of a verdict by the jury adjudging to the Contention a large portion of the Head Center, including the hoisting-works on that mine. This ground, it is said, includes all the valuable portion of the Head Center property, but is not all the Contention sued for. With the exception of the Head Center, all the leading mines are actively worked. The Girard 20-stamp mill is now ready for use, and good results are anticipated when the stamps are set in motion. The Tombstone Mill and Mining Company's mines are reported to be looking unusually well and sending the usual quantity of ore to the mill. The Vizina is taking out considerable ore, and reports that recent developments are extremely favorable.

VIZINA CONSOLIDATED MINING COMPANY.—Copy of last superintendent's report, January 28th: Have sent to the mill up to date about 360 tons of ore. The stope of the main east drift is improved a great deal since my last report. The new drift starting from the Sumner drift and striking west has been driven 30 feet, and exposes a large body of ore, giving evidence of a large quantity of pay ahead. This portion of the mine is unexplored. The north drift has been cut a little farther, and opens up heavy mineralized matter. We have discovered a rich stratum of ore in this drift which is running north. The 400-foot level is in heavy ground, well mineralized.

CALIFORNIA.

CALAVERAS.—A telegram from the assistant superintendent says: Shall begin hydraulicking to-morrow. Hard storm still continues. Good prospects—no stop. Reservoir finished and men discharged.

INYO CONSOLIDATED.—The superintendent reports, January 29th: Every thing in and around the mines and mill continues to run and look well. Will ship 12 bars bullion in a day or two; value about $12,000. I have a good force of men here now, and my shipments will be much greater in future.

BODIE DISTRICT.

A dispatch, dated Bodie, February 8th, says: During the past week, Standard Consolidated shipped to the mill 1200 tons of ore; average pulp-assay, $14.41. Shipped to the company, $59,817.

Official reports dated January 28th are as follows:

BODIE CONSOLIDATED.—During the week ended the 28th, 98 tons of ore were sent to the mill and 74 tons were extracted from the mine. The mill crushed 108 tons of ore. The bullion shipment was $8508, or at the rate of $78.15 per ton. Seven feet were added to the north drift from winze No. 9, so that it is 103 feet in length. The vein is about 10 inches wide in the face, and there is the same improvement as previously reported. The west cross-cut from winze No. 13 is now 30 feet long. This drift will probably cut the Fortuna west of the fault during the current week. In drifting south along that portion of the vein reached in the west cross-cut from winze No. 9, the ore maintains its width and is as rich as ever. About five tons of this ore were sent to the mill last week.

BULWER CONSOLIDATED.—The west cross-cut from the south drift on the 600-foot level of the Standard mine has been run during the week 9 feet; total distance from the shaft, 300 feet. The face is in very hard rock.

GOODSHAW.—The shaft was sunk five feet during the week. No material change in the formation.

LENT SHAFT.—The station at the 800-foot level is nearly completed. The pumps are lowered, and connection will soon be made. Sinking will probably be resumed next week. The usual progress is made in prospecting.

NOONDAY.—The Noonday mill is running steadily on ore from the Noonday and North Noonday mines. The ore comes from the stopes of the 212, 312, 412, and 512-foot levels of the Noonday and the stopes of the 312 and 412-foot levels of the North Noonday.

STANDARD CONSOLIDATED.—During the past week, there were extracted and shipped to the mills 1244 tons of ore from the 385, 500, and 550-foot levels. The average pulp-assay for the week was $17.23. The bullion shipped to San Francisco was valued at $32,175.51. The shaft was sunk 10 feet. Its depth is now 1140 feet. The west cross-cut, 1000-foot level, is in 632 feet. The face is in a soft formation carrying some good-looking quartz. The west cross-cut, 700-foot level, is now 429 feet in length. The east cross-cut, same level, is in 712 feet. The rock is about the same, with occasional seams of quartz. The south drift, 500-foot level, has been run since last report 17 feet. Its length is 634 feet, showing the vein to be 5 feet wide. West cross-cut No. 1, from this south drift, is in 301 feet. The rock is hard. West cross-cut No. 2 is 117 feet long. The uprise on the Bullion vein is up 177 feet, showing a vein 5 feet wide. There is no change in the appearance of the stopes. On the 385-foot level, north drift, the vein holds its usual width; and on the 550-foot level it is about 15 feet wide. Referring to the reported improvement in the west cross-cut, 1000-foot level, the *Free-Press* says: This is the first time that news of this character has been given out. The indications are good for finding an ore-body at depth. Meanwhile the main shaft is sinking, and it is down 1140 feet. A new strike in the Standard would be of lasting benefit to the camp.

CANADA.

BEAUCE.—Mr. C. W. Kempton, in concluding a report to this company, the property of which is located on the Gilbert River, in St. Francis, Beauce Co., P.Q., about three miles from the junction of the Gilbert and Chaudière rivers, says: In 1880, I made examination of this and other properties, and a shaft was sunk to bed-rock, on what appears to be the rim of a branch of the old channel. This channel has given very good results, as up to the time of my last personal knowledge of the underground workings, in September, 1880, it had produced a large amount of gold, sometimes as high as $100 per day, and this without washing the bed-rock or using quicksilver, the work in progress being simply development. The property is 561 feet wide and 3740 feet long, and to the best of my knowledge and belief, after repeated and careful examination of the ground, includes not less than twenty-five acres of the richer portion of the old river channel of Gilbert Valley, at a point where, from the general appearance and developments of the ground, the junction of the old channels must have taken place, and where the richest gold deposits of the ancient stream may be expected.

COLORADO.

BOULDER COUNTY.

Referring to the Ward District, the Boulder *Herald* says: This is one of the oldest and richest gold-producing districts in Colorado. It is located about twenty miles northwest of Boulder, near the summit of the continental divide. Mining was prosecuted here as early as 1859, and proved a lucrative business as long as the surface quartz held out. As depth was gained, the ores became too refractory for stamp-mills to treat, and as they were not very high-grade, and there being no smelting-works near, they could not be profitably worked, so many were obliged to be abandoned. There were some, however, for instance, the Ni-Wot, Celestial, Columbia, and Humboldt, that were so rich that they warranted the transporting of mineral to the far away smelters and thus work in this district was kept up. Since then, a wonderful change has taken place. Mills have been erected, towns built up, and capital brought into the State with which to develop our mines. The Ni-Wot is the oldest and best worked mine in the district. It has produced a million of dollars, and is still worked with success. A fifty-stamp mill is kept busy reducing the ore, and with excellent results. Work has been resumed on many of the mines that have been lying idle, and new discoveries are chronicled almost every week. Indeed, a steady and sure success is confidently expected for the future of this district, and its mines will undoubtedly warrant it.

The *Daily Register-Call* of late date has the following:

CAMERON CONSOLIDATED.—The Cameron Company is driving a tunnel on the Sheridan Hill lode No. 2. It is carried 6½ × 7½ feet in the clear, and is 40 feet from the tunnel approach. The crevice-matter, while passing thus far through a heavy slide, is more or less mineralized. The initial point of the tunnel on this vein is on the easterly slope of Sheridan Hill, and has ample ground for dumpage purposes. The general manager of the property has let a contract for driving the Chicago Boy tunnel, situated north of the former tunnel, and which penetrates Sheridan Hill. The contractors have commenced work. Upon the return of the general manager from New York in April next, the working-shafts of both the last-named lodes will be sunk to a greater depth.

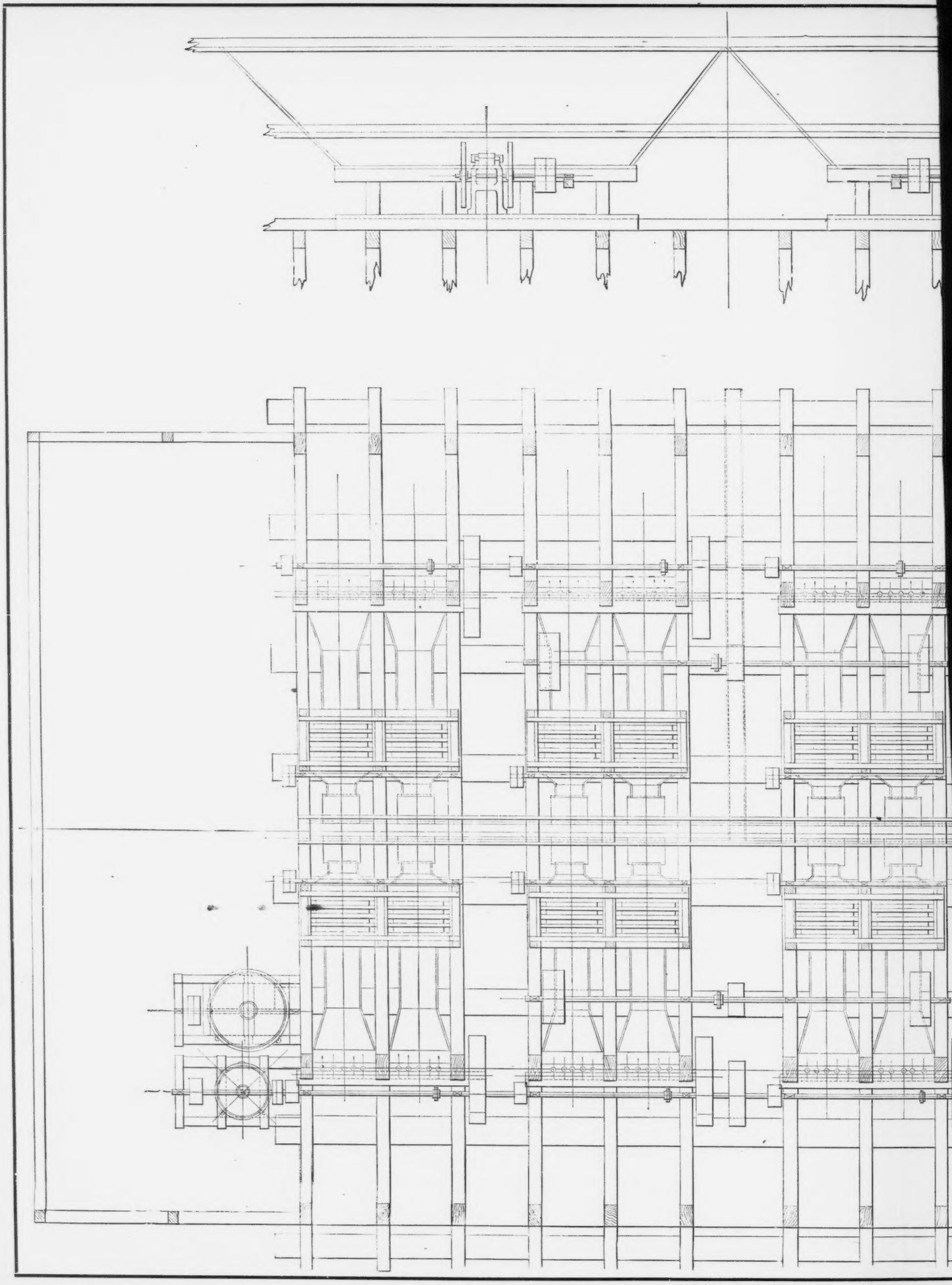
RARA AVIS.—The company has its boiler and engine, and line of shafting of its new concentration-mill in Eureka Gulch in readiness for driving the ore-crusher, jigs, tables, etc. On the 30th ult., steam was applied to the engine for the first time, every thing working smoothly. In the tunnel level, the crevice material is wide, well-defined, and carries quantities of mineral.

WYANDOTTE CONSOLIDATED.—The company, since resuming work on the Wyandotte vein, is driving its west 350-foot level from the engine-shaft. The pay-matter is not of a high quality.

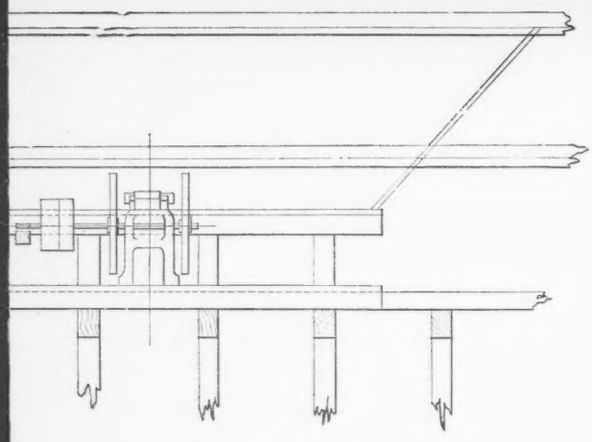
GUNNISON COUNTY.

BRITTLE SILVER.—On this property, organized with a capital stock of $500,000, with 400,000 shares, Mr. Achille Falco, of Alpine, reports as follows: The Brittle Silver group of mines is composed of eight mining claims, known as the Brittle Silver, Iowa, Isabel, Good Hope, Marengo, Alvaredo, Ontario, Atlantic, of 1500 by 300 feet each, together with the Anna placer claim, containing about 46 acres. The claims all join the main claim—the Brittle Silver—and were located with a view to protect the property from intrusion by outsiders, and also to secure a body of timber well fitted for mining purposes. The property is located at the head of Quartz Creek, on Evans Mountain, twelve miles from the town of Pitkin, in the county of Gunnison, and State of Colorado, and is only two thirds of a mile from the Denver & South Park Railroad. The Brittle Silver claim is a true fissure-vein in porphyry with the most decided outcroppings ever seen, showing two different veins of rich material from 8 to 14 feet wide, connecting together in one solid vein of high-grade ore, and was located in June, 1880. Work on the mine consists of a cross-cut tunnel 180 feet in length, intersecting the small vein, on which drifts were made 60 feet to the north and 30 feet to the south. One shaft 80 feet deep, and four others between 15 and 20 feet deep, show in all the workings rich mineral in place.

FOREST QUEEN.—An important strike is reported in the east cross-cut of this mine at Ruby Camp. The Gunnison *News-Democrat* says that a cross-cut was started a short time ago from the bottom of the shaft, and run in an easterly direction. When this cross-cut was in about 30 feet, the workmen came upon this vein with well-defined and perfect walls, showing a pay-streak of solid ruby and native silver ore three feet in width. The mineral is very rich, and has every indication of being the genuine Forest Queen vein. The vein being struck

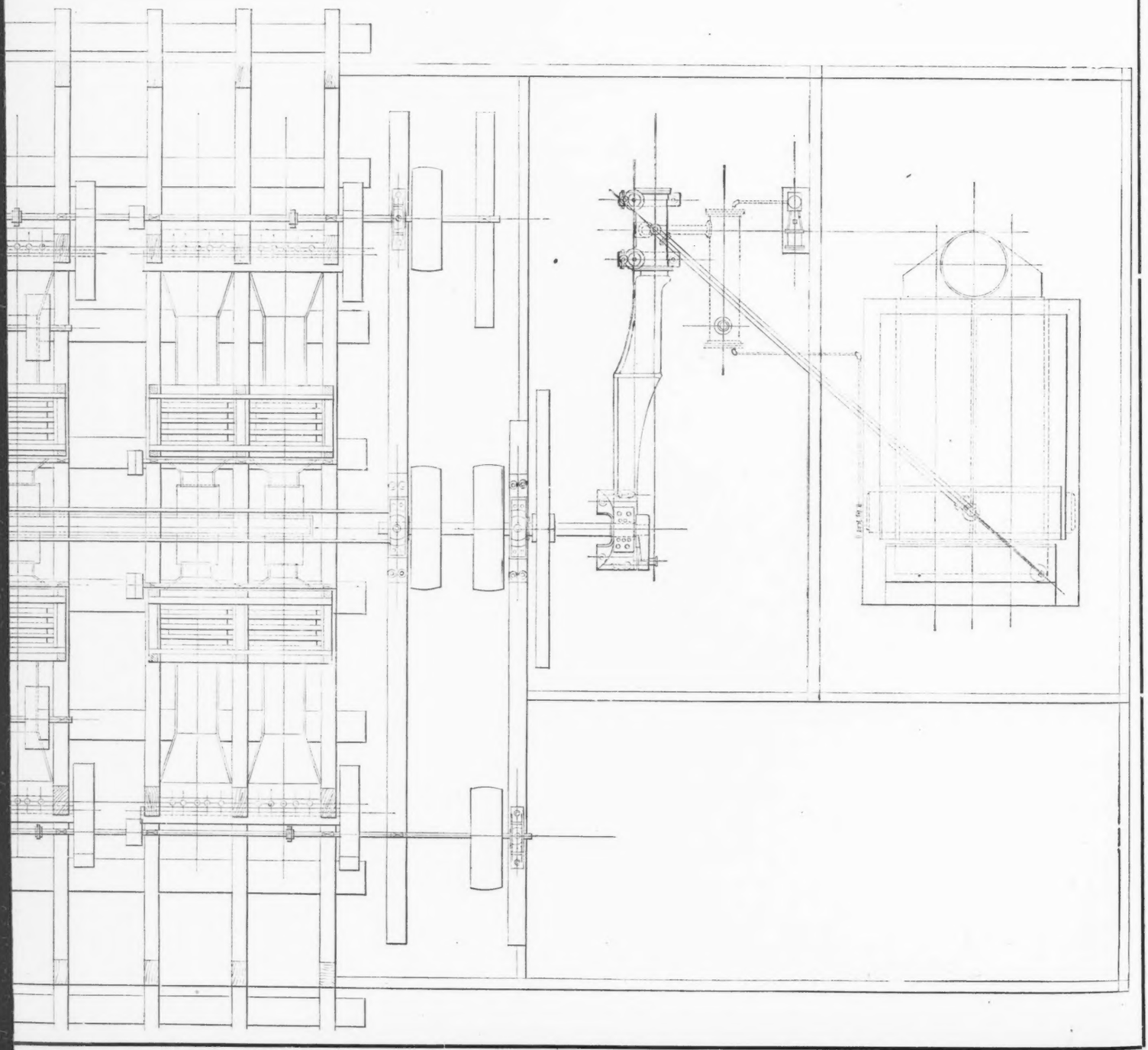


THE FATHER D



PLAN

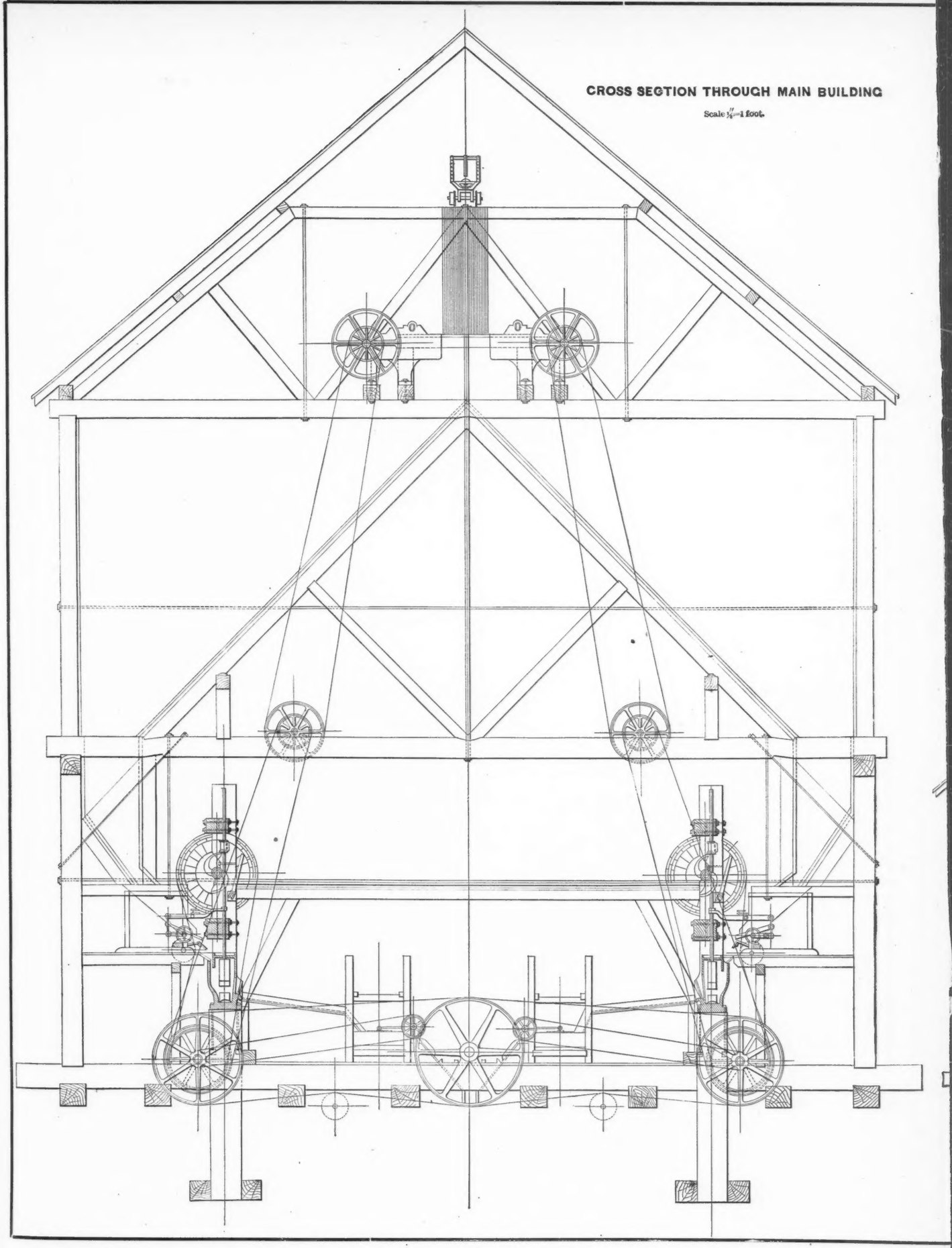
Scale 1/8—1 foot.

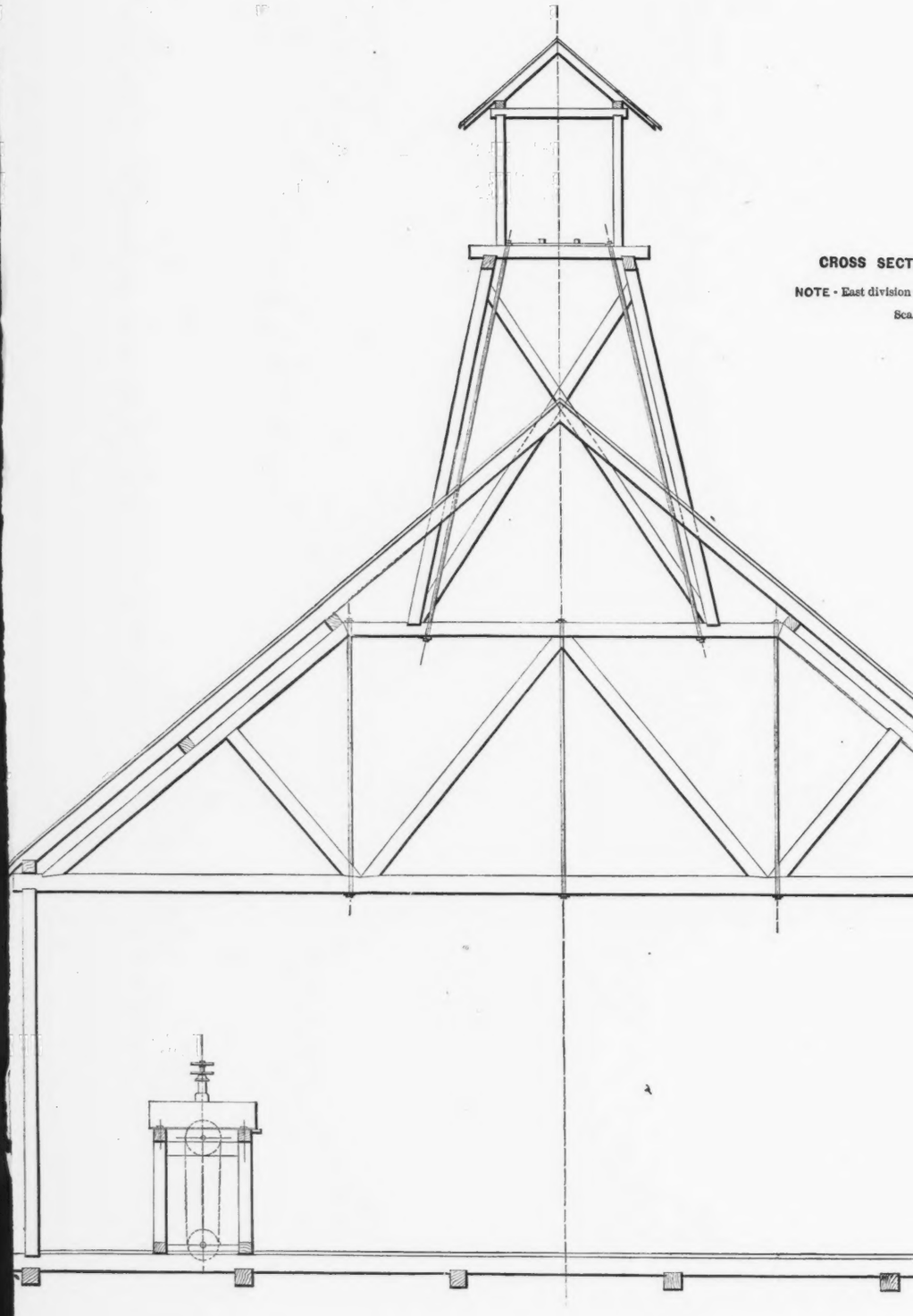


HER DE SMET MILL.

CROSS SECTION THROUGH MAIN BUILDING

Scale $\frac{1}{8}$"=1 foot.





CROSS SECT

NOTE - East division

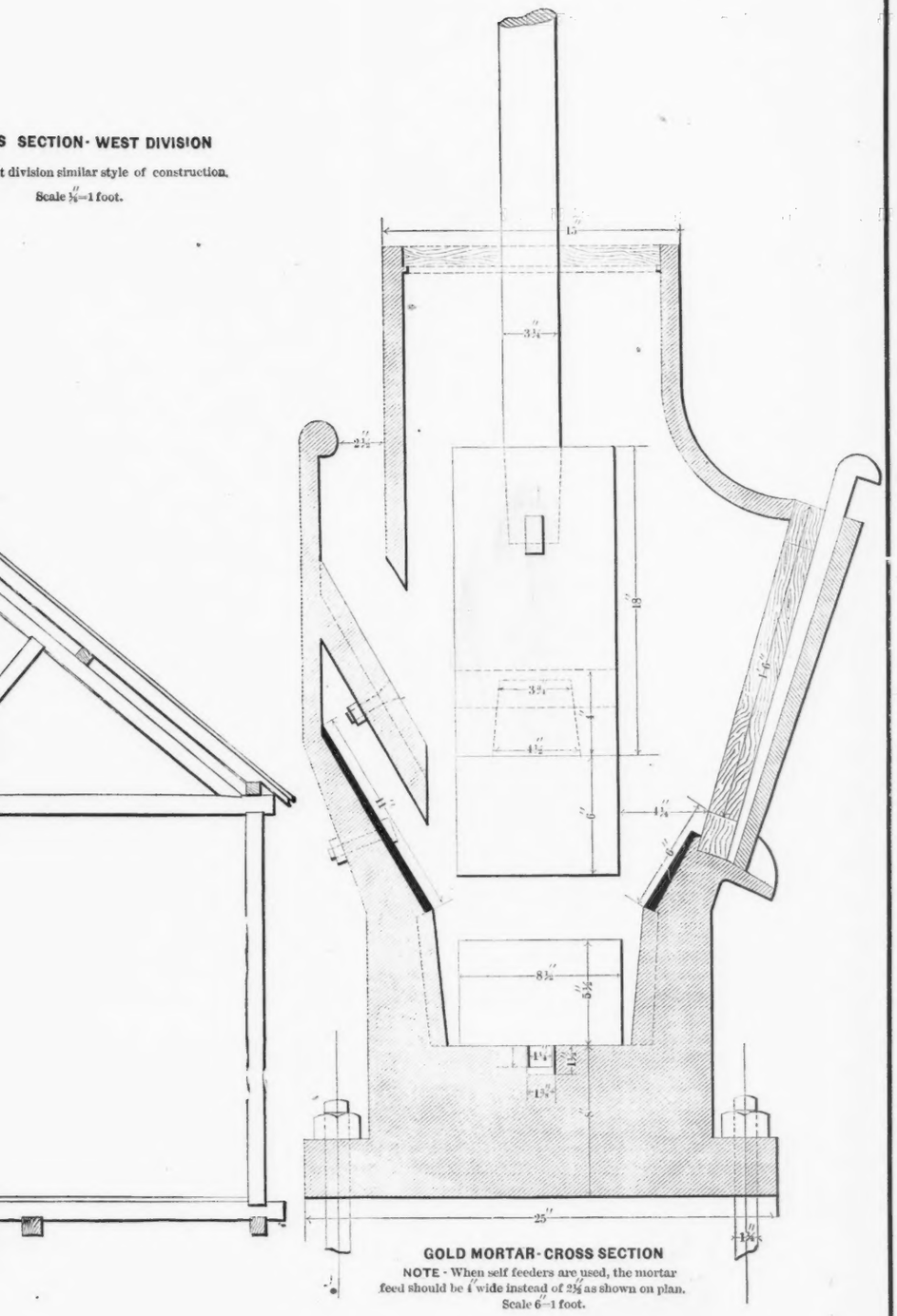
Sca

THE FATHER DE SMET MILL.

S SECTION- WEST DIVISION

t division similar style of construction.

Scale $\frac{1}{4}$"=1 foot.



GOLD MORTAR- CROSS SECTION

NOTE - When self feeders are used, the mortar feed should be 4" wide instead of 2½ as shown on plan.

Scale 6"=1 foot.

at the depth of 180 feet, and in solid formation with perfect walls, disproves the supposition that the vein on the surface was a slide.

LAKE COUNTY.

CHRYSOLITE.—The Leadville *Mining Index* says: Manager Rolker, of the Chrysolite, at present is concentrating his efforts in exploration-work. The pay-roll of the company this week contains 400 names, and the monthly expenses for January will aggregate about $36,000. Forty-five drifts are driving, radiating in all directions; also, in addition, the Roberts shaft is sinking. This shaft, which was 203 feet in depth when the work was begun, is down 220 feet. Manager Rolker estimates that, at the present rate of progress, over 400 linear feet of drifts and winzes are made every week, besides extracting 180 tons of ore per week. The ore shipped will average about $64 above smelting charges per ton, which makes the receipts of the mine per month a trifle over $50,000 at this rate of output and grade. The sinking of the Roberts shaft is accompanied by an increasing flow of water, and extensive provisions have been made for handling it. A tank or reservoir has just been cut in the large body of iron on the second level, forty feet from the shaft, 27×15×8 feet, at which a large Knowles pump will be placed to pump the water to the surface, a distance of 157 feet. Three smaller pumps force the water from the lower stations and bottom of the shaft to the cistern or tank. The Chrysolite mine at present contains over 31,000 linear feet of drifts, levels, and rises, or about six miles.

CLIMAX.—According to the Leadville *Herald*, the manager of this company has just completed a contract for 1000 tons of iron ore, which has been delivered at the smelter of Cummings & Finn.

PARK COUNTY.

LONDON.—The Fairplay *Flume* states that the progress on this lode is the same as for months past, the only change of note being that regular shipments of ore, on a small scale, have begun. The ore is merely what high grade comes from the Blanchard tunnel in development, and amounts to about ten tons per week. This tunnel has penetrated the mountain about 600 feet, and is on the vein for 200 feet. The heading is 6×7 feet in the clear, and by means of the air-drills is pushed eight feet every twenty-four hours. The company is working thirty-five men at this place and is cross-cutting to explore the vein at the middle tunnel.

SAN JUAN COUNTRY.

CHICAGO ENTERPRISE.—We are in receipt of the report of the manager of this company for the months of November and December. During this time, the shaft on the White mine was sunk 24 feet, making the total depth 56½ feet from the bottom of the chamber in the tunnel. In the last ten feet, a great change has taken place; the walls have widened to seven feet; the iron is beginning to disappear; fine copper and blende coming in, and quartz is widening.

DAKOTA.

CALEDONIA, B. H.—This company, which has always experienced trouble from the lack of water, will sink the shaft 100 feet, both for the development of the mine and to secure a water supply. Machinery has been ordered.

FATHER DE SMET.—The superintendent reports, for nine days ended February 1st, that 2200 tons of ore were extracted from first level, 800 tons from second level, and 266 tons from third level. During the week, 3266 tons of ore were milled. The north-end tunnel was advanced 54 feet in January, and is in 411 feet. The south header, Golden Gate, was advanced for the month 32 feet, and is in 106⅜ feet. In the McGinty chamber, 35 sets were broken during the month.

HOMESTAKE.—A strike of a rich body of ore on the 100-foot level is reported. The ore assays high, but none is extracted.

MCMAKEN MICA.—Two thirds of this mica mine were sold a short time ago for $25,000. The mine is in Custer County, and is well developed, having already shipped over 10,000 pounds of mica. It is expected that the mine will be able to take out about 50,000 pounds during 1882.

IDAHO.

ATLANTA HILL.—The superintendent writes, under date of January 5th: We are progressing finely with work. Second tunnel is now in 145 feet, with a fine ledge two feet in width in face, which we have worked on for some distance. It holds its own well; both foot and hanging-walls are solid and well defined; ore prospects well; am sure it will mill $150 per ton. Shaft connection has been made between first and second tunnels, which shows a nice ledge all the way down, a depth of 75 feet. Will commence work to-morrow in the Hall tunnel at the bottom of the main shaft, which I will drive ahead, as I expect to find a larger body of ore than heretofore, as the ledge in the shaft from the first to the second tunnels proved better all the way down. Shaft connection will give us plenty of air to work for 300 feet ahead east.

WOOD RIVER.

A correspondent sends us the following from Broadford: The Queen of the Hills was the first location made of any note in Galena Gulch, 1¼ miles west of Bellevue. Extensions No. 1 and 2 followed soon after. The Queen of the Hills is worked this winter by a force of six men. A tunnel and shaft are running. The tunnel is run in over 180 feet, and the shaft has been sunk down about 80 feet. In both places, the ore shows up well. The Clipper has made a shipment of 15 tons of ore assaying 143 ounces in silver and 65 per cent of lead. The Overland shipped over 15 tons of high-grade ore last year, and three men are at work this winter sinking shaft and running level. The Minnie Moore mine is the largest in the camp, and perhaps on the river. There has not been as much work above on it as on various others, but the chambers of rich galena are well exposed in many places along the lead. The owners, J. M. Moore, of New York City; H. E. Miller, of Bellevue, Idaho; and F. H. Meyers, of Salt Lake City, Utah, are working for the development of their property at present. The view on the surface shows up from 2 to 8 feet of galena, all assaying over $100 in silver and 65 to 70 per cent of lead. The discovery incline is down on the ledge 75 feet. It shows a regular body of galena over 4 feet in thickness for over 50 feet; after that, the vein contains from two to five feet in width. At the bottom of the incline in the face, the ore assayed 160 ounces in silver. The water was so troublesome that sinking was discontinued for a time. Levels were run each way through ore-bodies for a distance of 50 feet. Then the owners concluded to sink another incline, known here as the Singletary, 90 feet east of the discovery. In it, they found a regular body of ore from 1 foot to 40 inches in width. The ore taken out from there at present averages about 150 ounces per ton in silver. Copper glance is very plentiful in the ore. Levels are running, one to connect with the east level of the discovery-shaft and the other eastward along the vein. About 280 feet east from the Singletary, the vein is exposed by a cut and an incline, down about 30 feet and shows two streaks of ore, each two feet in thickness. The ore at this point has more carbonates mixed through it than the ore at discovery and Singletary. It assays from 60 to 150 ounces in silver per ton. The mine produced during three months' work last year 231 tons of ore, which was sold for $140 to $160 per ton. The mine made a dividend of $12,000, besides paying all expenses, and still having $5000 for working purposes to be expended during 1882. The mine has a very large dump of second-class ore to be disposed of yet. There are 10 men employed this winter, and the force will be increased as soon as shipping commences in the spring.

MICHIGAN.

NATIONAL.—A recent issue of the Ontonagon *Miner* contains the following account of a visit to this mine: At the old mine, we found great activity prevailing in preparations making to put down the pump-plunger to the bottom of the shaft. The water is now about 20 feet below the 60-fathom level, and it is hoped that the most difficult part of the work is past, and that, after the 70-fathom level is reached, no serious obstructions will be met. Let us all hope so. At the new shaft on the north vein, we found the work had progressed more rapidly since they had been able to hoist the rock by steam. The shaft is down 95 feet, and the contract of the party will be completed next week, when it will reach the depth of 100 feet. About eight feet from the bottom, we saw a very fine mass of copper still in the vein projecting out about six feet, and varying in width from two to four feet, and still going back in the vein solid. From what is in sight, we should think it was good for from between three and four tons; but this can not be determined until it is stoped out, when it may prove to be a very large deposit of copper. There has already been taken out, in sinking near and around it, nearly three tons of copper. The vein-rock perhaps is not quite as rich as that taken out heretofore, but that could hardly be expected when so much mass copper has been deposited close by. Proceeding to the surface again, we examined several very fine masses of copper which had been taken out of the shaft, amounting to several tons, and of sufficient value to pay for the work of sinking, besides the rich stamp-rock which has been produced from the surface downward.

MONTANA.

HECLA.—At the annual meeting of this company, the report of the superintendent of the reduction-works was submitted, showing that during 1881 the works turned out 56,299 bars of base bullion, weighing 4,843,646 pounds; that it turned out 550,630 pounds of copper matte, containing in all 534,197 ounces of silver, and 215,067 pounds of copper. The report of the superintendent of the mines shows that about 11,000 tons of ore was delivered at the works during the past year, which was taken principally from the Atlantis, True Fissure, Mountain Sheep, Silver Quartz, and Cleopatra mines. The general manager's report shows the gross earnings or output of the company's mines to be $874,-112.40; that all expenses of every description, including water supply, were $636,383.73; and that the net profits for the 13 months were $237,728.77.

We are indebted to the Butte *Miner* of the 29th ult. for the following regarding the mines of the Summit Valley Mining District:

ALICE.—Work is going on as usual in all the levels. Some 40 tons of ore are hoisted daily. There is nothing new to be reported as to the condition of the mine or the working of the mills. The new three-compartment shaft on the Magna Charta had been sunk to the depth of 25 feet yesterday morning. A depth of 125 feet will be attained before cross-cutting, the vein curving at this point and the shaft standing about 35 degrees east of north of it. In the Magna Charta, work is progressing actively on the 100, 200, 300, and 400-foot levels. Rising is going on in all the levels, and stoping on the first south vein on the 400-foot level. On this level, the north vein has not yet been struck, and it may be reached now any day. About 40 tons are extracted daily from the mine, averaging $50. The battery samples show an average of $47 straight through.

MOULTON.—The daily output of the mine is from forty to forty-five tons. In the new mill, about fifty tons of ore are handled per day, some ten or twelve tons coming from the Goldsmith. The latter mine is developed only to the depth of fifty feet, and the ore is consequently free, and something richer on an average than the Moulton ores, running about 20 ounces. In the Moulton mine, work is going on in the 200 and 300-foot levels, on the center vein. The drifts on the 200-foot level are in 100 feet each way on the vein, and rising and stoping are going on. On the 300-foot level, rising is done near the junction of the Alice and Moulton lines, a fine ore-chute having been discovered in the rise which is to connect the 200 and 300-foot levels.

STEVENS.—Work on the east 200-foot level is progressing as usual, the face being 340 feet from the main shaft. Some very fine ore has been taken out during the week. At the west end of the mine, the drift east from the whim-shaft on the hanging-wall of the vein is progressing rapidly on very fine ore. This level will soon be under the winze from the 90-foot level, which showed such good ore. It is probable that a rise will be started at this point and meet the winze, when a large body of first-class ore will be available for extraction. The stopes on the 90-foot level are producing well; a considerable quantity of ore on the dump will be shipped as soon as the Silver Bow mill is ready to receive it.

Grading is actively pushed on the Northern Pacific, not only westward from the end of the work and eastward to Lake Pend d'Oreille, but also both ways from Helena, about 30 miles having already been graded. This company will build in connection with the Union Pacific from a point on its main line at Garrison southward, to meet an extension of the Utah & Northern branch, Union Pacific, from Deer Lodge, Montana. By this line, the Northern Pacific will be able to obtain rails and supplies to carry on its track-laying from this central section as well as from the eastern and western ends.

The Utah Northern is in operation to Brule City, M. T., 417 miles north of Ogden and 8 miles east of the main line at Silver Bow Junction. From the latter point north, 40 miles will be built to a junction with the Northern Pacific at a point 10 miles north of Deer Lodge City.

NEVADA.

CENTENNIAL-SAPPHIRE.—A survey of the property has been made for the purpose of securing a United States patent. A survey of a short water-pipe line is also to be made from the company's springs to the mines. The officers state that work at the company's mine in Lida Valley District, Nev., was resumed early in January, and that the mines are developing well.

THE COMSTOCK LODE.

The Gold Hill *News* of the 1st inst. says: The Sutro Tunnel connection with the Forman shaft was made yesterday. A few days more will place the drift in proper shape to receive the water from the shaft, which will lessen the expense of pumping considerably and be of great advantage in furnishing good ventilation. It will not be many days before the Savage folks make the connection between their incline and drift. The connection, when made, will be of untold importance. In the first place, it will permit of the starting of work in Chollar and Potosi. Then, it also opens up the lower levels of the Savage and permits of prospecting in new and interesting ground, ground which has given every indication of the presence of the precious metals. In all the principal mines, the work is such that any day an ore-body may be run into. The formation in all the cross-cuts, from Sierra Nevada on the north to Alta on the south, bears streaks of quartz from which assays are obtained. It is more than probable that in some one of them a bonanza will be developed.

ALTA.—As the east drift approaches the vicinity of the first ledge, the rock becomes softer and works better. The drift is now in 767 feet. The west drift was extended 50 feet the past week.

OPHIR.—The joint California east drift, 2700 level, is extended 20 feet per week, and the main north drift 25 feet. The drains are completed on the 2700 and 2900 levels in the joint Mexican drifts. Ore amounting to 364 tons was sent to the mills last week, and 184 tons were extracted from the croppings.

SIERRA NEVADA.—The winze in cross-cut No. 2, from the 2500 level, is sunk at the rate of nine feet per week. East cross-cut No. 5, same level, is run 24 feet, and the main north lateral drift 35 feet per week. North drift No. 2 is run 17 feet. The work joint with Union Consolidated goes on as usual.

UNION CONSOLIDATED.—The east cross-cut from south drift No. 2 is making good progress, as is all the work carried on in the mine. The joint Sierra Nevada east winze was sunk and timbered nine feet the past week.

COLUMBUS DISTRICT.

Official reports, dated January 28th, are as follows:

MOUNT DIABLO.—Winze No. 1 has reached a depth of 72 feet, and the east

drift from winze No. 3 is in 110 feet, but is showing no change. Winze No. 4, the most easterly winze on the third level, is down 60 feet, and has yielded so far $50 ore during the week. The east drift on this level has advanced 14 feet, showing small streaks of ore which assay $120 per ton. The stopes above this drift look very well, and are giving considerable ore that will mill $75 to $80. Some good ore has also been taken from below the third level, in the west drift, near the head of winze No. 1. A stope has been started near winze No. 1, which will extend toward the second level. The winze from the west drift on the second level is down 102 feet, and has followed a ledge of ore giving low assays. The east drift shows some good ore in the stopes.

NORTHERN BELLE.—Eight feet have been added to the depth of the main shaft during the week, and three sets of timbers have been put in. The total distance made to the 23d instant was 25 feet. The fourth shaft level does not present as promising an appearance as last week, the ore in the drift run from the 25-foot winze being of fair grade, but not showing as much in width. Fair headway is making in sinking the main winze from this level. In the intermediate, between the first and second levels, the hanging stope is showing fully as well as at the time of last report, the ore being hard, but of fair grade. There is no material change in the other shaft levels. The levels above the adit continue their usual production. There are extracted and sent to the mill about 63 tons of ore daily. The mill was stopped two days during the early part of the week to clean flues and repair the furnace, but has been running steadily since. Bullion shipments for week ending January 26th, $16,115.04. Shipments on January account to January 26th, $49,383.91.

EUREKA DISTRICT.

ALBION.—We learn from the Ruby Hill *Mining News* of the 30th ult. of an important development that has been made in one of the west drifts of the Albion. A fine body of ore is reported as having been met with, the extent of which can not as yet be determined. The find is in a portion of the ground entirely remote from the disputed territory, and the superintendent is of the opinion that it is of extensive proportions. An additional force of men is to be employed at once, and the ground will be fully explored as rapidly as possible.

NEW MEXICO.

ORGAN MOUNTAIN.—A Philadelphia company, entitled the Organ Mountain Mining and Smelting Association, has issued a pamphlet containing reports by J. W. Heysinger and Professor Rittler on the unusual number of fifty properties, in addition to which "there are perhaps twenty more." "For obvious reasons, the location of these is not made public." The former include the "Cueva," "Fillmore Pass," "Colorado," "Alto," "Stephenson," "Memphis," "Black Quartz," "Rio Grande," "Chippewa," and "East Side" groups of mines. Very little work appears to have been done. Professor Rittler reports that he went to the Stephenson mine with a portable blow-pipe apparatus, with the aid of which he made a number of assays. The professor (who signs himself "administrator of mining and smelting," whatever that may be) estimates the clear income for one day's work at $483.20, and he adds that "this very low estimate will certainly correspond entirely with practical operations."

FINANCIAL.

Gold and Silver Stocks.

NEW YORK, Friday Evening, Feb. 10.

There is quite a large business doing still, although not so large as a week ago. Prices, however, are not encouraging to investors, most of whom went in at high figures.

The Tuscarora stocks have been quiet. The transactions have included six stocks. The only feature, however, was a decline in Navajo from 60 to 52c.

The Comstock shares have had only a moderate business, with generally lower prices. California sold at 25@18c., assessment unpaid, and 40@42c., assessment paid. Consolidated Virginia sold at 80@65@74c. Sierra Nevada declined from $10@$8⅝. Best & Belcher was fairly active at $8⅛@$7⅞. Mexican records sales of 2635 shares at $10⅝@$9¼. Sutro Tunnel has been active and quite irregular at 75@91@75@86c.

The Bodie stocks have had a fair business. Bodie sold to the extent of 1810 shares at $3.75@$3.45. Standard, although quiet, was stronger than it has been for some time, selling up to $18. Boston Consolidated, with sales of 28,200 shares, sold at 30@38c.

Alice has been quiet, selling down to $2.90 to-day. Amie has been very active, selling from 16@21c., the sales aggregating 55,100 shares. Bassick, which has not appeared in the dealings for a long time, sold to the extent of 200 shares at $5. Chrysolite has had a moderate business at $4.55@$4.30. Dunkin has had a moderate business at quite irregular prices, selling from 50c. up to 88c. and back to 50c. Green Mountain, under fair transactions, has ranged between $2@$2.45. Early in the week, sales of 335 shares of Homestake were made at $20@$19. Horn-Silver, under a moderate business, has been a shade weak, selling from *17½@$16⅞. Iron Silver has been a little quiet but strong, at $2.10@$2.20. Robinson Consolidated still continues to be very active. It sold at $2.70@$2.35@$2.80, the transactions aggregating 131,500 shares.

Big Pittsburg has been fairly active and quite strong, selling from 75@$1.05. Bradshaw, under a moderate business, has ranged between 45@53c. Bull-Domingo sold at 23@26c. Central Arizona, under a moderate business, declined from $1.30@$1.15. Oriental & Miller has been quiet at 29@34c. Rappahannock has had a moderate business within the range of 31@34c. South Pacific has been meeting our expectations. It has been very active, the sales aggregating 217,020 shares, and declined from $5.25@$2.10. The State Lines have had a fair business, Nos. 1 and 4 selling at 22@26c., while 2 and 3 ranged between $1.45@$1.25. The Beauce Gold Mining and Milling Co., of Canada, a new stock in the market, has been quite active, selling from $2@$1.40.

DIVIDENDS.

The Deadwood-Terra Mining Company has declared a dividend for January of 15 cents per share, payable on the 20th inst. Transfer-books close on the 15th.

The Evening Star Mining Company has declared a dividend (No. 30) of five per cent on the capital stock; also, dividend (No. 31) of the same amount, making a total of ten per cent, payable February 15th. The transfer-books close on the 11th.

The Jocuistita Mining Company has declared a dividend of one hundred and fifty thousand dollars, being a quarterly dividend of one dollar per share, and an extra dividend of fifty cents per share, payable on the 28th inst. Transfer-books close on the 23d.

The Ontario Silver Mining Company has declared the regular monthly divieend (No. 76), of 50 cents per share for January—total amount of dividends paid, $4,100,000—payable February 15th. Transfer-books closed on the 10th.

The receivers of the Philadelphia & Reading Railroad Company will pay, on and after February 10th, 1882, the unpaid July, 1881, coupon of the general mortgage bonds of said company.

DIVIDEND-PAYING MINES.

NAME AND LOCATION OF COMPANY.	SHARES. No. in 1000's	SHARES. Par Value.	ASSESSMENTS. Levy to date in 1000's.	ASSESSMENTS. Date and amount per share of last.	DIVIDENDS. Total paid to date in 1000's.	DIVIDENDS. Date and amount per share.	HIGHEST AND LOWEST PRICES PER SHARE AT WHICH SALES WERE MADE. Feb. 4. H.	Feb. 4. L.	Feb. 6. H.	Feb. 6. L.	Feb. 7. H.	Feb. 7. L.	Feb. 8. H.	Feb. 8. L.	Feb. 9. H.	Feb. 9. L.	Feb 10. H.	Feb 10. L.
Alice, Mon.	400	25	*		400	De 81 10	3.05	...	3.05	...	...	...	3.10	3.05	3.05	.....	2.90	...
Amie Con., Co.	500	10	*		305	My 80 10	.17	.16	.19	.17	.20	.18	.20	.18	.21	.20	.21	.19
Argenta, Ne.	100	100	149	Se 81 10	40	Fe 80 20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bar & Walker, Ut.	100	10	*		60	No 80 10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bassick, Co.	100	100	*		25	Fe 80 25	.....	.....	5.00	.....	5.00	.....	.....	.....	.....	.....	.....	.....
Belle Isle, Ne.	100	100	55	Se 81 10	300	De 79 25	.....	.....	.15	.....	.....	.....	.10	.....	.....	.....	.....	.....
Black Bear, Ca.	30	100	15	Se 79 50	830	De 81 20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bo cher, Ne.	104	100	2380	Se 81 1 00	15397	Ap 76 75	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bodie Cons., Ca.	100	100	125	De 81 50	1200	Mr 80 25	3.75	3.50	3.75	3.50	3.60	3.45	3.75	3.45	3.45	.....	3.50	.....
Breece, Co.	200	25	*		2	Fe 80 1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bulwer Ca.	100	100	30	De 77 50	30	Fe 82 10	2.50	2.40	.....	.....	2.45	.....	.....	.....	2.45	.....	2.50	2.45
California, Ne.	540	100	270	Ja 82 20	31320	De 79 50	.25	....	.25	.23	.25	.15	.23	.20	.40	.18	.42	.20
Cal. & Hecla, Mch.	100	25	....		20350	No 81 5 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Caribou Con., Co.	100	10	*		50	Mr 80 10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Catalpa, Co.	300	10	*		180	My 81 20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.60	.....
Chrysolite, Co.	200	50	*		1600	De 81 50	4 50	4.30	.....	.....	4.55	4.30	4.50	.....	4.40	.....	4.35	.....
Climax, Co.	200	10	*		180	Au 80 30	.....	.....	.40	.37	.40	.37	.39	.38	.40	.38	.40	.38
Cons. Va., Ne.	540	100	735	Fe 82 30	42030	Au 80 50	.76	.70	.80	.76	.75	.65	.78	.70	.74	.70	.74	.70
Copper K'b, N.C.	1000	1	*		15	No 80 02	.03	.02	.03	.02	.03	.....	.03	.02	.03	.02	.03	.....
Copper Queen, Ar.	250	10	*		200	Ja 82 10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Crown Point, Ne.	100	100	2573	Se 81 75	11588	Ja 75 2 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
D'dw'd-Terra, Dk	200	25	*		4566	Ja 82 15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dunkin, Co.	200	25	*		200	Ju 81 7½	.65	.50	.88	.57	.65	.63	.63	.62	.60	.50	.60	.54
Eureka Cons., Ne.	50	100	100	My 76 1 00	4730	Se 81 50	12.38	...	.....	.....	.....	.....	12.00	.....	12.00	.....	11.75	.....
Evening Star	50	10	....		650	Ja 82 1 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Excelsior, Ca.	100	100	300	Ja 82 1 00	850	Se 80 25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Exchange, Ne.	100	10	*		15	03	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fa. de Smet, Dk.	100	100	....		390	Fe 82 25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Findley, Ga.	200	1	*		8	My 79 1c	.23	.....	.23	.....	.....	.....	.....	.....	.....	.....	.....	.....
Freeland, Co.	200	25	*		50	My 80 25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gem, Co.					4	De 81 ...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Glass-Pend., Co.	250	20	*		25	My 81 10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gold Stripe, Ca.	150	10	*		70	Jy 81 15	.57	.36	.....	.....	.36	.....	.....	.....	.....	.....	.....	.....
G'd & Curry, Ne.	108	100	3388	Ja 82 50	3829	Oc 79 $10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Grand Prize, Ne.	100	100	340	Oc 81 25	450	Se 80 25	.....	.....	.....	.....	.....	.....	.05	.....	.....	.....	.....	.....
Great Eastern, Dk	300	1	*		16	Jy 80 01	.09	.....	.09	.....	.09	.....	.09	.08	.09	.....	.....	.....
Gr. Mountain, Ca.	125	10	*		212	No 81 7½	2.15	2.00	.....	.....	.....	.....	2.10	2.00	...	.....	2.10	.....
Hale & Nor., Ne.	112	100	3838	De 81 75	1598	Ap 71 5 00	...	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hibernia, Co.	300	25	*		180	Jy 81 10	.17	.16	.17	.15	.17	.16	.17	.15	.18	.16	.17	.16
Homestake, Dk.	100	100	200	Ap 78 1 00	1250	Ja 82 30	20,00	19,00	19,00	19,00	.....	.....	.....	.....	.....	.....	.....	.....
Horn-Silver, Ut.	400	25	*		800	Fe 82 75	17¾	.....	17¼	17¼	17⅛	.....	17.00	16.88	17.25	17.00	17.00	.....
Hukill, Co.	200	5	*		210	De 78 10	.....	.....	.75	.33	.70	.....	.....	.....	.74	.....	.....	.....
Idaho, Ca.	3100	100	....		3102	Ja 82 7 50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Indep., Ne.	100	100	170	Au 81 15	225	Se 79 25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
In. Queen, Ne.	125	2	.....	Fe 80 15	288	Se 81 05	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Inyo, Ca.	100	5	*		40	De 81 05	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Iron Silver, Co.	500	20	*		500	De 81 20	2.15	2.10	2.20	.....	2.15	.....	2.20	2.15	.....	.....	2.20	2.15
Jocuistita, Mex.	100	100	....		200	No 81 1 00	...	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
La Plata, Co.	200	10	*		450	Fe 82 10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Leadville C., Co.	400	10	*		170	De 81 05	.....	.....	.....	.....	.....	.....	.60	.....	.64	.....	.70	.....
Leeds, Ut.	60	100	51	Je 81 25	78	Oc 78 15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Little Chief, Co.	200	50	*		700	Au 80 50	.92	.....	.94	.85	1.00	.98	1.00	.99	1.05	.97	1.15	1.00
Little Pitts., Co.	200	100	*		1350	Mr 80 50	.....	.....	1.80	1.70	1.75	.....	.....	.....	.....	.....	1.75	1.65
Martin White, Ne	100	100	900	Ja 82 25	90	Jy 79 25	.....	.....	3.60	.....	.....	.....	.....	.....	3.50	.....	.....	.....
Moose, Co.	200	10	4		550	Mr 78 25	.93	.....	.....	.....	.93	.92	.93	.....	.92	.....	.95	.94
Navajo, Ne.	100	100	200	De 81 15	25	Mr 81 25	.60	.....	.60	.55	.....	.....	.....	.....	.53	.....	.52	.....
N. Y. & Colo., Col.	50	20	*		25	Jy 79 10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
N'h'n Belle, Ne.	50	100	....		2088	De 81 75	10.50	.....	.....	.....	11.00	10.50	11.13	11.00	11.13	.....	11.00	10.75
N. Belle Isle, Ne.	100	100	25	Fe 80 15	20	Au 81 15	.....	.....	.....	.....	.....	.....	.15	.....	.....	.....	.....	.....
Ontario, Ut.	150	100	....		4625	Ja 82 50	35.00	.....	.....	.....	35.00	.....	.....	.....	.....	.....	.....	.....
Ophir, Ne.	100	100	3092	Mr 81 1 00	1603	Ja 80 1 00	6.00	.....	5.75	.....	6.00	5.75	.....	.....	5.75	.....	.....	.....
Osceola, Mich.	50	25	....		610	Oc 81 1 50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Plumas, Ca.	100	10	*		151	Jy 79 8	.....	.....	.21	.....	.....	.....	.....	.....	.....	.....	.20	.....
Quicks. Pref., Ca.	43	100	....		396	Au 81 9 25	.....	.....	61¾	61½	61⅜	61¼	62.00	.....	.....	.....	.....	.....
Com., Ca.	57	100	....		128	De 81 25	13½	13.00	.....	.....	.....	.....	.....	.....	.....	.....	13.00	.....
Quincy, Mich.	40	25	....		2710	Au 81 3 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rising Sun, Ca.	150	5	*		52	My 81 7½	.66	.65	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Robinson C., Co.	200	50	*		575	No 81 50	2.70	2.40	2.63	2.35	2.60	2.35	2.50	2.40	2.65	2.55	2.80	2.55
Robt. E. Lee, Co.	500	500	....		50	Jy 81 10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Savage, Ne.	112	100	5496	Ja 82 50	4160	Ju 69 3 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sierra Nev., Ne.	100	100	4850	De 81 1 00	102	Ja 71 1 00	10.00	.....	8.85	8.75	9.00	.....	9.50	9.00	9.25	...	8.75	8.63
Silver King, Ar.	100	100	....		800	De 81 25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Silver King, Co.	500	2	....		50	Au 81 10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Spr'g Valley, Ca.	200	1	*		50	Ja 81 25	.....	.....	.....	.....	4.10	.....	4.00	.....	4.05	4.00	4.00	.....
Standard, Ca.	100	100	50	Jy 78 1 00	3375	Ja 82 75	17½	.....	17.00	.....	17½	16¾	17½	.....	18.00	17.50	.....	.....
Starr-Grove, Ne.	200	10	*		16	Ju 81 10	1.50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stormont, Ut.	200	1	*		155	No 81 05	1.35	1.25	1.50	1.30	1.35	.....	1.30	1.25	.....	.....	.....	.....
St. Joseph, Mo.	100	10	*		200	De 81 20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tip Top, Ar.	100	100	120	Mr 80	100	No 81 20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tombstone, Ar.	500	25	*		1100	Ja 82 10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Vizina, Ar.	200	25	....		80	De 81 10	2.75	2.70	2.75	.....	2.80	2.75	2.85	2.75	2.80	2.75	2.85	2.75
Yel. Jacket, Ne.	120	100	4150	Oc 81 1 00	2184	Au 71 2 50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

SALES.—Alice, 1600; Amie Consolidated, 55,100; Bassick, 200; Belle Isle, 245; Bodie Consolidated, 1810; Bulwer, 790; California, 11,015; Catalpa, 200; Chrysolite, 3250; Climax, 7200; Consolidated Virginia, 26,840; Copper Knob, 13,600; Dunkin, 7355; Eureka, 250; Findley, 200; Grand Prize, 100; Gold Stripe, 400; Great Eastern, 7,600; Green Mountain, 4600; Hibernia, 14,500; Homestake, 335; Horn-Silver, 1335; Hukill, 2150; Iron Silver, 5160; Leadville, 800; Little Chief, 9905; Little Pittsburg, 500; Martin White, 300; Moose, 6600; Navajo, 900; Northern Belle, 1370; North Belle Isle, 25; Ontario, 1164; Ophir, 300; Plumas, 500; Quicksilver, preferred, 600; Common, 600; Rising Sun, 600; Robinson Consolidated, 131,500; Sierra Nevada, 1900; Spring Valley, 700; Standard, 470; Starr-Grove, 300; Stormont, 1950; Vizina, 3800. Dividend shares sold, 334,019.

UNLISTED QUOTATIONS.

Mr. L. V. Deforeest, No. 70 Broadway, under date of February 10th, 3 P.M., reports the current quotations of unlisted stocks as follows:

	Bid.	Off'd.		Bid.	Off'd.
Colum. & Beaver	$0.50	$0.80	Hite	....	$2.25
Eagle	....	2.00	Menlo	....	1.25
Freeland	.95	....	Madre	....	2.90
Hall-Anderson	1.70	1.75	Satemo	....	1.25
Harlem	1.20	1.30			

SAN FRANCISCO MINING STOCK QUOTATIONS.
Daily Range of Prices for the Week.

NAME OF COMPANY	CLOSING QUOTATIONS. Feb. 3.	Feb. 4.	Feb. 6.	Feb. 7.	Feb. 8.	Feb. 9.
Alpha	1¾	1⅝	2⅛	2⅛	2¼	2
Alta	5¼	5¼	5¼	5⅜	5⅜	4¾
Bechtel	....	....	11-32	....	11-32	11-32
Belcher	1⅛	1	15-16	1	1	1
Best & Bel	7⅜	7½	7⅝	7¾	7½	7⅜
Bodie	3⅜	3½	3½	3⅜	3½	3⅜
Bullion	15-16	15-16	29-32	29-32	29-32	....
Bulwer	....	....	....	....	2½	⅝
California	¼	¼	3-16	3-16	¼	3-16
Chollar	1¼	1⅜	1⅛	1⅛	1⅛	1¼
Con. Va	¾	¾	11-16	¾	11-16	11-16
Crown Pint	¾	¾	¾	¾	¾	11-16
Eureka Con	....	12	12	11½	....	11½
Exchequer	11-16	21-32	¾	11-16	11-16	21-32
Gould & Cur	3¼	3⅜	3½	3½	3⅜	3¼
Hale & Nor	2½	2⅜	2⅜	2⅜	2¼	2
Manhattan	....	....	....	....	....	1¾
Mar. White	3	3¼	3⅜	3½	3¾	3¾
Mexican	9⅝	9¾	9⅝	9⅞	9⅛	10⅜
Mono	1¼	1¼	1⅛	1⅛	....	1
Mt. Diablo	7⅜	7⅜	7¼	7⅜	....	....
Navajo	19-32	19-32	9-16	9-16	½	....
N'rth Belle	10¼	10½	10¾	10⅞	11	11
Noonday	5-16	¼	....	3-16	....	....
Ophir	5⅞	5⅞	5⅞	5⅝	5⅞	5⅝
Oro	5-32	5-32	3-16	¼	5-16	¼
Overman	27-32	¾	27-32	¾	¾	1⅛
Potosi	....	1⅜	1½	1⅜	1⅜	1⅜
Savage	1⅝	1⅝	2	2⅛	1⅞	1¾
Scorpion	15-16	15-16	15 16	29-32	15-16	1
Sierra Nev	9¼	8¾	8⅞	9	9	8¾
Silver King	18⅞	19	19	....	18½	....
Tip Top	4¼	....	....	....	....	....
Union Con.	10⅝	10¼	10¾	11	10⅞	11
Wales Con	....	....	29-32	1	29-32	1
Yel Jacket	2¼	2⅛	2¼	2¼	2¼	2⅛

REVIEW OF THE SAN FRANCISCO MARKET.

With but few exceptions, the San Francisco list is lower. Alpha is up to $2 per share and Mexican has advanced to $10⅜. Alta is down nearly $1 per share. Belcher closed yesterday at $1 per share, against $1⅛ as quoted a week ago.

Copper and Silver Stocks.

Reported by C. H. Smith, 15 Congress street, Boston, Stock Broker and Member of the Boston Mining and Stock Exchanges.

BOSTON, Feb. 9.

During the past week, the market for copper stocks has continued dull and almost featureless. Prices have not materially changed, but there is no vim in the business. Orders to buy are limited to the first-class mines, and in the speculative list there is literally nothing doing. The active market which the brokers have been long anticipating seems to be as far off as ever. The silver stocks are also dull, and prices are generally lower. Calumet & Hecla opened at $234 on a sale of 12 snares, but declined daily until to-day it touched $230 for 70 shares, closing at $231. Quincy has ruled steady at $40½@$42, closing to day at $41½ bid. Franklin was rather heavy, and declined from $1 2½@$12. Pewabic was very firm at $14, which seems to be the bottom price. Atlantic declined from $14@$13¾, ex dividend $2. Osceola is also lower, with sales at $32. Phœnix is the strongest on the list, and advanced from $2@$4, and closed in demand at $2¾ bid, $3 asked. Allouez sold at $3@$2¼; Ridge, at $3; Huron, at $2½; Blue Hill, at 50c.; National at $.⅝, and Brunswick Antimony at $15.

In silver stocks, San Pedro advanced from 50@62½c.; Sullivan declined to $15⅛ closing later at $2 bid; Silver Islet declined from $2.@$20; Harshaw advanced from $3¼@$3¾; Catalpa declined from 75@55c.; and Crescent, from 45@47½. Indian Queen sold at $3.

At the Boston Mining and Stock Exchange, a fair amount of business has been transacted. Prices of mining stocks, however, have a tendency to go lower, and, with the exception of one or two specialties, the market is dull and featureless. The Board is making an effort to create business in stocks other than mining, and quite a number of sales of railroad stock and bonds is reported this week. Milton continues fairly active at 17@19c. Empire declined to 50c. Massachusetts & New Mexico advanced from 24@27c., and Deer Isle from 24@28c. War Eagle declined from 95@50c., closing later at 60c. bid. Twin Lead declined from 21@15c.

3 P.M.—There was no improvement at the Boards this afternoon, the market closing dull and lower. Calumet sold at $230; Osceola at $32; Pewabic at $14. Quincy declined to $40. Allouez sold at $2¾; Silver Islet at $22, closing $21 bid; Phœnix at $2 15-16; Franklin, $11¾ bid; Atlantic, $13 bid, $14 asked.

Coal Stocks.

NEW YORK, Friday Evening, Feb. 10.

Coal stocks have been comparatively quiet during the past week, and quotations have remained uniformly steady. Delaware, Lackawanna & Western has had a business of 114,960 shares at $127⅛@$123¼. Delaware & Hudson records sales of 7793 shares at $107¾@$108⅝. New Jersey Central has sold to the extent of 34,785 shares at $95¼@$97⅝. Reading has had sales in this market of 28,410 shares at $62@$64¼.

The annual meeting of the Maryland Coal Company was held in this city on the 7th inst., when the following Board of Directors was elected: George L. Kingsland, Ludlow Patton, Henry Loveridge, George P. Bangs, Daniel S. Appleton, Francis Robinson, Joseph Havemeyer, Nicholas Rath, J. E. Knapp, John G. Wendel.

NON-DIVIDEND PAYING MINES.

NAME AND LOCATION OF COMPANY.		NUMBER OF SHARES.	Par.	ASSESSMENTS. Total levied to date.	Date and amount of last.	HIGHEST AND LOWEST PRICES PER SHARE AT WHICH SALES WERE MADE. Feb. 4. H.	L.	Feb. 6. H.	L.	Feb. 7. H.	L.	Feb. 8. H.	L.	Feb. 9. H.	L.	Feb. 10. H.	L.
Albion, S. L.	Nev.	150,000	100	330	Nov. 81	30								2.00			
Allouez	Mich																
Alta	Nev.	100,800	100	1,884,000	Dec. 81	50										4 80	4.25
Alta-Montana, G	Mon.	500,000	10	*				1.70									
Am. Flag, S	Co	120,000	10	*										9c			
Bald Mountain, G	Colo	1,000,000	10	*												1c	
Barcelona, G	Nev	20,000	25	*		22c	20c	21c	19c	22c	20c	20c	19c	21c	19c	20c	19c
Rattle Creek	Dak.	200,000	25	*													
Bear Creek	Colo	30,000	1														
Beaucon G'd M.M.C						2.00	1.65	1.60	1.50	1.50		1.55	1.40	1.50	1.45	1.55	1.40
Belcher Con., G	Cal.	100	100	162,750	Dec. 81	25											
Best & Belcher, G	Nev.	100,800	100	1,053,730	Jan. 82	50	8.15	7.50	7.75	7.63	7.75		8.00	7.75	7.75		7.35	
Big Pittsburg, S L	Colo	200,000	100	*			75c		85c	80c	1.05	90c	1.05	1.00	1.00	97c	1.00	
Black Jack, G	Cal.	100,000	2½														
Bonanza Chief	Mon	1,000,000	1	*													
Bondholder	Colo	250,000	2½														
Boston Con., G	Cal.	1,6,000	100	50,000	Sept. 81	20	31c	30c			37c	35c	38c	34c	38c	35c	36c	34c
Boulder Con., S	Colo	200,000	10						4c		5c	4c					5c	
Bradshaw, S	Ariz	225,000	10				5 c		50c	48c	47c		50c	45c	53c	50c	5 c	
Buckeye	Co	100,000	5	*			3c		4c	3c			3c					
Bull-Domingo, S L	Colo	200,000	50	*			23c				25c		26c	24c	30c		3 c	
Bullion, G & S	Nev.	100,000	100	3,892,000	Jan. 82	30												
Bye and Bye	Ariz	100,000	10	*			7c						7c	6c	8c	6c		
Calaveras, G	Cal.	500,800	1	*					12c				11c				1 c	
Clav'r's W & M. Co	Cal.						51c	50c	51c	50c	48c	46c			47c	43c	46c	
Cal., B. H., G	Cas.	100,000	100	400,000	Mar. 81	25	9 c				9 c	90c						
Carbonate Hill, S L	Colo	400,000	1						25c	24c	26c	24c			27c			
Catskill, S	Nev.	3 0,000	5															
Central Arizona, S	Ariz	100,000	100				1.25	1.20	1.25	1.15	1.25	1.20	1.30	1.25	1 30	1.15		
Chapparal	Cal.																	
Cherokee, G	Cal.	150,000	1				45c				45c		50c	45c			43c	
Cheyenne Con., G	Dak.	300, 00	1															
Clarence	Can.																	
Colorado Cent'l, S	Colo	300,000	10															
Col'mb'a Con., G S	Nev.	100, 00	50															
Cons. Imp'r'l, G	Nev.	500,000	100	1,42 ,000	Jan. 82	10			18c	12c								
Con. Pacific, G	Cal.	60,000	100	114,000	Jly 81	40												
Con. Pay Rock, S	Colo	250, 0	1				30c	25c					5c					
Crescent, S L	Colo	3 0,00	1	*														
Crowell, G	N. C.	50 ,00	1				11c		10c		11c	10c	10c				8c	
Dahlonega, G	Ga.	250,000	1	*					7c				7c					
Dardanelles, G	Cal	1 0,00	10															
Dunderberg, S	Colo	150,000	10	*														
Durango, G	Dak.	500, 00	1	*			40c	35c	39c	37c	39c	35c	40c	34c	38c	35c	4 c	35c
Empire, S	Uth	1 0,0 0	100															
Enterprise	Colo						71c	70c	72c	71c	71c	70c	72c	71c	72c	7 c	72c	7 c
Exchequer	Nev.	100,000	100	65 ,000	Jan. 82	25												
Globe Copper	Ariz.																	
Glyn Dale Con. G	Cal.	100,000	100	75,000	Jan. 81	25												
Gold Placer, G	Colo	200,000	25	*					3 c						3 c		37c	
Goodshaw, G	Cal.	100,000	100	145,000	Feb. 81	15			40c		43c		35c	33c	40c			
Granville, G	N. C.	300,000	1	*			3c											
Harshaw, S	Ariz	100,000	100															
Head Center, S	Ariz	100,000	10	55,00	May 81	30												
Hortense, S	Colo	200,000	10				3 c	28c			29c	28c	3 c	29c	3 c	28c	3 c	25c
Index	Cal.																	
Julia, G S	Nev.	100,000	100		Jan. 82	20												
Kossuth, G S	Nev.	1 8,000	100															
Lacrosse, G	Colo	100,000	10	*														
Legal Tender, S L	Colo	200,0 0	5															
Leviathan, S	Nev	100,000	10	35,000	Mar. 81	25												
Lucerne, S	Colo	500,000	10	*														
Malachite	Nev.	200,000	5															
Mariposa Pref., G	Cal.	50,000	100	1,437 500	Dec. 81													
Com., G	Cal.	100,000	100	1,450,000	Dec. 81													
May Belle, G	Cal.	100,000	100	125,000	Dec. 81	21												
Mayflower, S	Colo	100,0 0	100	*										24c	2 c			
Mexican, G. & S	Nev.	100,800	100	1,600,800	Sept. 81	$1	10.00		10.00	9.25	9.63		10.38	10.00	10.25	9 15	10.0	9.88
Michoacan Synd.	Mex.																	
Mineral Creek, S	Ariz	200,000	10	*			6c	4c	5c	4c	5c	4c	5c	4c	5c		5c	4c
Miner Boy, G S L	Colo	5 0,000	10	*			9c	8c	9	8c	8c		8	7c	8c	7c	7c	
Miller	Nev.	200,000	25															
Mono	Cal.	50,000	100	400,000	Dec. 81	50	1.35										1.10	
Moose Silver, S	Colo	3 0,000	10															
Nevada Syndi																		
North Standard, G	Cal.	100,000	10		Nov. 81	10									5c			
North State	N. C.	400,000	25				10c				11c	1c					10c	
N. Horn-Silv'r, S L	Utah	400,000	10											35c				
Noonday	Cal.	400,000	100		Jne 81	50												
Old Dominion	Ariz	200,000	10	*														
Oriental	Nev.	200,000	25															
Ori'nt'l & Miller, S	Nev.	400,000	25				34c	29c	34c	31c	34c	33c	32c	31c	33c	32c	33c	30c
Overman, G S	Nev.	115,200	100	3,458,300	Jan. 82	50												
Rappahannock, G	Va.	250,000	1	*			34c	33c	32c	31c	33c	32c	35c	33c	34c	33c	34c	32c
Red Elephant, S	Colo	500,000	10	*							14c	13c	15c	12c				
San Pedro, G S L	N. M	400,000	25															
Silver Cliff, S	Colo	200,000	50	*			2.2		2.25	2.20					2.20	2.15		
Silver Islet	Can.																	
Silver Nugget, S	Ariz	200,000	10	*							9c	8c					7c	
Silv'r N, n'w stk, S	Ariz	250,0 0	10				9c	8c	9c	8c	9c	8c	9c	8c	8c		9c	8c
Sonora Con	Mex.														12c			
South Bulwer, G	Cal.	1 0,000	100	85,000	Nov. 8	25												
South Bulwer, G	Cal.	1C0,0 0	100	195,00	May 81	25	18c		20c				20c					
South Hite	al.	100,000	5		Jan. 82	10	2oc	7c	7c				17c					
South Pacific	Cal.		1				5.25	3.50	4.40	4.00	4.25	3 95	4.05	3 40	3.60	2.50	3.30	2 10
State Line No. 1, S	Nev.	200,000	25															
" No. 2, S	Nev.	200,0 0	25															
" No. 3, S	Nev.	200,0 0	25															
" No. 4, S	Nev.	200,000	25															
" Nos. 1 & 4, S	Nev.						25c	22c	25c	23c	25c	20c	26c	23c	24c	22c	25c	24c
" Nos. 2 & 3, S	Nev.						1.45	1.30	1.40	1.25	1.35	1.20	1.35	1.30	1 35	1 25	1.35	1.25
Sutro Tunnel	Nev.	2,00 ,000	10	*			88c	76c	88c	75c	91c	75c	89c	85c	88c	7 c	86c	79c
Tabor Mine	Colo	250,000	20															
Taylor Plumas							39c	28c	30c	26c	27c	2 c	2 c	17c	23c	20c	24c	20c
Tioga, G	Cal.	100,00	100	26 ,000	Jan. 82	10	24c						21c					
Tuscarora, S	Nev.	100,00	100	95,000	Apr. 8	15									18c			
Unadilla, S	Colo	500,00	1	*					18c				17c					
Union Cons., G S	Nev	100,00	100	1,160,00	Jly 81	$1			11.00	10.5	10.75		11 3		11c	10c	10.88	
Utah	Nev.	20,000	100	1,210,000	Jan. 82	1												
Vandewater, S	Nev	20,000	10	*			34c	33c	31c	33c	31c	32c	34c	28c	28c	26c	3 c	2 c
Washington, S	Ariz.	20 ,0	5														1 c	10c
Willshire, G	Cal	5 ,00	1	*														

SALES.—Albion, 100; Alta-Montana, 500; Alta, 200; American Flag, 500; Barcelona, 17,200; Bald Mountain, 500; Beau e Gold M. & M. Co., 15,000; Best & Belcher, 2000; Big Pittsburg, 4400; Bonanza Chief, 4300; Boston Consolidated, 28,200; Boulder Consolidated, 5200; Bradshaw, 8300; Buckeye, 4000; Bull Domingo, 2050; Bye and Bye, 4500; Calaveras, 4300; Calaveras W. & M. Co., 4200; California, B. H., 1500; Carbonate Hill, 2200; Central Arizona, 7900; Cherokee, 3500; Consolidated Imperial, 300; Consolidated Pacific, 100; Consolidated Pay Rock, 300; Crowell, 2000; Dahlonega, 1500; Durango, 41,100; Enterprise, 4700; Gold Placer 200; Granville, 1000; Goodshaw, 3000; Highland Chief, 100; Hortense, 5200; Mayflower, 400; Mariposa, common, 200; Mexican, 2635; Mineral Creek, 24,500; Miner Boy 13,900; Mono, 500; Noonday, 400; North State, 9,000; North Standard, 1000; Oriental & Miller, 8800; Rappahannock, 11,300; Red Elephant, 1500; Silver Cliff, 700; Silver Nugget, old, 4200; Silver Nugget, new, 12,200; Sonora Consolidated, 1000; South Bulwer, 500; South Hite, 4300; South Pacific, 217,020; State Line, Nos. 1 and 4, 21,750; State Line, Nos. 2 and 3, 112,050; Sutro Tunnel, 32,600; Taylor-Pumas, 24,700; Tioga, 300; Tuscarora, 700; Unadilla, 2000; Union Consolidated, 700; Vandewater, 20,900; Washington, 4000. Non-Dividend shares sold, 711,705. Total shares sold at all the Exchanges, 1,045,724.

BULLION MARKET.

NEW YORK, Friday Evening, Feb. 10.

DATE.	London Pence.	N. Y. Cents.	DATE.	London Pence.	N. Y. Cents.
Feb. 4	52	114¼	Feb. 8	52 1-16	114⅛
Feb. 6	52	114⅛	Feb. 9	52 1-16	114⅛
Feb. 7	52	114⅛	Feb. 10	52 1-16	114¼

The foreign market for silver and the market here

COAL STOCKS.

NAME OF COMPANY.	Capital Stock.	SHARES. No.	SHARES. Par Val.	Last Dividend. Mo.	Y.	R't.	Rate per Ann.	Quotations of New York stocks are based on the equivalent of $100. Philadelphia prices are quoted so much per share. Feb. 4. H.	Feb. 4. L.	Feb. 6. H.	Feb. 6. L.	Feb. 7. H.	Feb. 7. L.	Feb. 8. H.	Feb. 8. L.	Feb. 9. H.	Feb. 9. L.	Feb. 10. H.	Feb. 10. L.	Sales from Feb. 3d to Feb. 9th inclusive.
	$		$				Per c'nt													
Am. Coal Co.	1,500,000	60,000	25	..	..	..	..	....	....	....	....	....	....	....	....	....	....	....	....	.....
Cameron C'l.	2,500,000	50,000	50	....	..	..	..	....	....	....	....	....	....	....	....	....	....	....	....	.....
Col. C. & I.	10,000,000	100,000	100	....	..	..	..	40½	39	....	....	....	....	40½	....	41	....	41	40¾	1,300
Ches. & O. Rk	15,000,000	150,000	100	....	..	..	..	24¼	24	24	....	24¾	24½	25	24½	24¾	24½	24¾	24¾	2,775
Consol. Coal	10,250,000	102,500	100	Jan.	82	2	..	....	....	....	....	....	....	....	....	....	....	....	....	.....
Cumb. C. & I.	500,000	5,000	100	....	..	..	..	....	....	....	....	....	....	....	....	....	....	....	....	.....
Del. & H. C.	20,000,000	200,000	100	Sept	81	1½	6	†	107¾	108⅛	108¼	108⅛	108⅝	108⅝	108¼	108¼	....	108⅛	108⅛	7,793
D., L. & W. RR	26,000,000	524,000	50	Dec.	81	2	8	‡	127	127¾	127	127⅝	12.⅜	127¾	127⅛	127¾	126¾	127½	126½	11,160
Lehigh C. & N	10,448,500	208,971	50	Nov.	81	3	5¼	43	....	4 ⅛	....	43⅛	43⅛	43½	....	4 ⅜	43¼	....	....	5,729
Leh. V. y R. R	27,042,900	540,858	50	Dec.	81	1½	6	..	....	62¼	....	62¼	62	62½	62¼	62	....	....	....	439
Mary'd Coal	4,400,000	44,000	100	....	76	1½	1½	....	....	....	....	....	....	....	....	18½	....	....	....	300
Montauk C'l.	2,500 000	25,000	100	....	..	..	..	....	....	....	....	....	....	....	....	....	....	....	....	.....
Morris & Es'x	15.000.000	300 000	50	Jan.	82	....	7	....	....	123	....	123	....	123	....	123	122	....	....	1,056
New Cen. C'l	5,000,000	50,000	100	Dec.	81	....	....	....	....	....	....	....	....	....	....	19	....	....	....	250
N. J. C. RR.	20,000,000	200,000	100	Oct.	76	2½	2½	96¼	9 ½	95⅞	95¼	96¼	95¼	96⅝	95¼	96¾	95¼	97⅛	96⅛	34,785
Penn. Coal...	5,000,000	100,000	50	....	..	..	....	....	....	....	....	....	....	....	....	....	....	....	....	.....
Penn. R. R..	68,870,200	1,337,404	50	Nov.	81	4	....	61⅛	6⅛	61⅛	61	61⅜	61¼	61¾	61¼	61⅛	61¼	....	....	25,177
Ph. & R. RR*.	34,278,150	685,563	50	Jan.	76	2½	10	62¾	62¼	6 ¾	62	63	62⅜	64¼	63	6 ¾	63	64¼	63¼	49,065
Spring Mt.C'l	1,500,000	30,000	50	Dec.	81	3½	7	....	....	....	....	....	....	....	....	....	....	....	....	.....

† 108⅛. ‡ 127⅛. Total sales, 242,777.

*Of the sales of this stock, 20,653 shares were in Philadelphia and 28,410 in New York.

BOSTON MINING STOCKS.

	Feb. 2. H.	Feb. 2. L.	Feb. 3. H.	Feb. 3. L.	Feb. 4. H.	Feb. 4. L.	Feb. 6. H.	Feb. 6. L.	Feb. 7. H.	Feb. 7. L.	Feb. 8. H.	Feb. 8. L.	SALES.
Adrie Cons.	1.30	1.29	1.29	.....	1.30	.....	1.30	1.29	1.30	1.29	1.30	1.29	1,800
Allouez	3 1-16	3.00	.....	.....	.....	.....	.....	.....	3.00	2.75	.....	.....	850
Ariz. Queen	.50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.50	.....	500
Arnold	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Atlantic	14.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	14.00	13.50	325
Bencon Hill	1.30	1.29	1.28	.....	1.28	.....	1.28	.....	1.29	1.28	1.28	.....	1,600
Blue Hill	.....	.....	.....	.....	.....	.....	.....	.....	.50	.....	.50	.....	1,100
Bonanza Devel.	5.00	4.75	.....	.....	.....	.....	.....	.....	4⅞	.....	.....	.....	605
boston & Eureka	.74	.73	.....	.....	.....	.....	.....	.....	.....	.....	.75	.....	500
Boulder C'n	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Brunswick Ant'y	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	15.00	.....	45
California	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cal. & Hecla	232 00	.....	234.00	.....	232.50	.....	232.50	.....	233.50	232.50	233.00	232.00	89
Carbonate Hill	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Catalpa	.70	.68¾	.75	.....	.70	.62½	.75	.56¼	.56¼	.50	.52½	.50	5,800
Cedar Springs	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Central	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Central Arizona	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1.15	.....	100
Columbus Gold	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cons. Virginia	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.72	.....	200
Copper Falls	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Copper Harbor	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Copperopolis	.....	.....	.....	.....	.....	.....	.12	.....	.....	.....	.....	.....	100
Crescent	.45	.40	.45	.42½	.....	.....	.40	.....	.45	.....	.37½	.....	205
Cumberland	.62	.....	.63	.....	.40	.....	.64	.63	.64	.63	.65	.64	2,100
"Cusi"	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dana	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Deer Isle	.24	.....	.25	.24	.25	.....	.26	.....	.27	.26	.29	.26	10,800
Douglass	.62½	.50	.76	.....	.....	.....	.....	.....	.....	.....	.....	.....	700
Duncan	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dunkin	.80	.....	.75	.65	.....	.....	.....	.....	.....	.....	.58	.....	400
Edgemoggin	.08	.....	.08	.....	.....	.....	.....	.....	.....	.....	.08	.....	1.200
Empire	.56	.....	.54	.52	.52	.....	.....	.....	.51	.50	.....	.....	1,050
Franklin	12⅝	12⅛	12⅝	12 7-16	.....	.....	.....	.....	12.25	.....	12.00	.....	500
Gem	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Globe, pref	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gouldsboro'	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Granger	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hanover	.....	.....	.12	.....	.....	.....	.....	.....	.....	.....	.....	.....	200
Harshaw	3⅜	3.25	3.25	.....	.....	.....	.....	.....	.....	.....	3.75	.....	550
Hopewell Mang	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Humboldt	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Huron	.....	.....	2.50	.....	2.50	.....	.....	.....	.....	.....	.....	.....	250
Indian Queen	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3.00	.....	100
Mammoth Copper	.10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.12	.....	1,050
Mascot	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mass. & N. Mex.	.23	.....	.26	.24	.25	.....	.....	.....	.27	.....	.27	.26	3,500
Mendocino	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1 00	.....	500
Mesnard	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Milton	.18	.16	.20	.17	.19	.18	18	.....	.17	.....	.18	.....	19,200
Minnesota	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Napa	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
National	.....	.....	2⅝	.....	.....	.....	.....	.....	.....	.....	.....	.....	300
New Castine	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Osceola	.....	.....	.....	.....	33.00	.....	.....	.....	32.00	.....	32.00	.....	63
Peabody	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pewabic	.....	.....	14.00	13⅞	14¾	.....	.....	.....	14⅝	14.00	14.00	.....	1,170
Phoenix	.....	.....	.....	.....	2.00	.....	2.25	.....	.....	.....	2.75	2.25	675
Pine Tree	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Plymouth Gold	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Port & Sullivan	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Quincy	42,00	41.50	42.00	.....	41.00	40.50	41.00	.....	41.00	.....	41.50	.....	213
Ridge	.....	.....	3.00	.....	3.00	.....	.....	.....	.....	.....	.....	.....	200
San Pedro	.50	.....	.50	.....	.....	.....	.....	.....	.....	.....	.60	.....	2,950
Silver Hill	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Silver Islet	28.00	26.00	27 00	25.00	25.00	19.00	20.00	.....	.....	.....	20.00	.....	531
Silver Lake	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Simpson Gold	.....	.....	.....	.....	.....	.....	.03	.....	.03	.....	.....	.....	200
Southern Belle	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
South Lite	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Star Copper	.....	.....	.....	.....	.75	.....	.75	.....	.85	.80	.87½	.....	1.300
Sultan Mtn. Silver	.70	.69	.69	.....	.68	.....	.68	.....	.70	.....	.66	.65	2,100
Sullivan	2.00	1.75	1.75	1⅝	1⅝	.....	1⅝	.....	1⅞	1⅝	.....	.....	720
Sycamore	.80	.77	.85	.80	.....	.....	.....	.....	.....	.....	.....	.....	170
Titus Cons	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tremont Silver	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Twin Lead	.....	.....	.....	.....	.....	.....	.21	.20	.22	.20	.....	.....	1,600
War Eagle	.....	.....	.95	.50	.62	.50	.....	.....	.60	.55	.60	.40	10,100
Winthrop	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Young Hecla	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

for sterling exchange have been well maintained the past week, and silver is firm at our rate for the day, as given in the accompanying table.

BULLION PRODUCTION FOR 1881 AND 1882.

We give below a statement showing the latest bullion shipments. These are officially obtained from the companies, where that is possible; and where official statements can not be procured, we take the latest shipments published in those papers nearest to the mines reported. The table gives the amount shipped for the week up to the date given, as well as the aggregate shipments to such date, from the first of January, 1882.

The shipments of silver bullion are valued at $1.29·29 per ounce, Troy; gold at the standard $20.67 per ounce, Troy. The actual value of the silver in the following table is therefore subject to a discount, depending on the market price of silver. If the price of silver be counted at $1.12 per ounce, which has for some months been about its average value, the following figures, where they relate to silver bullion, should be diminished by about 13⅓ per cent to arrive at actual value.

MINES.	States.	Month of January to date.	Year from Jan. 1st, 1882 ¶	Totals for year 1881.
Alta-Montana	Mont.	$12,200	$12,200	.....
*Alice, G. S.	Mont.	.....	.....	$88,276
Barbee & Walker, S.	Utah.	12,472	12,472	205,224
*Belle Isle, G. S.	Nev.	.....	.....	17,160
*†Big Pittsburg, S.	Colo.	.....	.....	57,949
*Black Bear, G.	Cal.	.....	.....	84,976
Bodie, G.	"	30,880	30,880	361,777
*Caledonia, G.	Dak.	10,937	10,937	101,974
California, G. S.	Nev.	.....	.....	118,694
Caribou, S.	Colo.	.....	.....	121,991
*Castle Dome	Ariz.	.....	.....	197,229
*Christy, S.	Utah	.....	.....	316,217
*†Chrysolite, S.	Colo.	.....	.....	600,388
Concordia, G.	Cal.	.....	.....	2,229
Connor, S.	Utah.	.....	.....	115,293
*Contention, G. S.	Ariz.	121,886	121,886	1,436,143
Con. Virginia, G. S.	Nev.	.....	.....	148,960
Crismon-Mammoth, G.	Utah.	1,780	1,780	67,420
*Custer, G. S.	Idaho.	27,821	27,821	80,675
*Deadwood-Terra, G.	Dak.	61,880	61,880	721,558
*Derbec Blue Grav., G	Cal.	.....	.....	130,184
*Eureka Con., G. S. L.	Nev.	62,500	62,500	1,188,248
Exchange Silver	"	.....	.....	44,400
Fresno Enterprise, G.	Cal.	.....	.....	9,600
*Grand Central	Ariz.	.....	.....	945,875
*Grand Prize, S.	Nev.	.....	.....	51,658
Hale & Norcross, G. S.	"	.....	.....	33,090
*Harshaw, S.	Ariz.	.....	.....	411,759
*Head Center	"	14,860	14,860	176,521
*Homestake, G.	Dak.	107,491	107,491	1,194,275
Horn-Silver, S. L.	Utah.	314,350	314,350	1,995,519
Idaho, G.	Cal.	.....	.....	596,160
*Independence, S.	Nev.	.....	.....	54,688
*Indian Queen, S.	"	.....	.....	182,439
Inyo Cons., G.	Cal.	40,000	40,000	.....
Iron Silver	Colo.	.....	.....	327,600
*Jocuistita, S.	Mex.	.....	.....	‡468,546
Leeds, S.	Utah.	4,950	4,950	.....
*†Little Chief, S. L.	Colo.	.....	.....	109,645
*Mack Morris	Ariz.	.....	.....	246,753
Manhattan, S.	Nev.	22,800	22,800	.....
*Modoc	Cal.	.....	.....	34,704
Morning Star	Colo.	.....	.....	15,200
*Mount Potosi, G. S.	Nev.	.....	.....	74,319
*Navajo	"	.....	.....	128,124
New York & Arizona.	Ariz.	.....	.....	2,755
Noonday, G.	Cal.	12,850	12,850	238,820
Northern Belle, S.	Nev.	61,470	61,470	1,212,236
North Noonday	"	11,000	11,000	.....
*Oneida, G.	Cal.	.....	.....	46,045
*Ontario, S.	Utah.	223,705	223,705 ‡	2,249,469
Ophir, G. S.	Nev.	12,000	12,000	62,346
Pascoe, S.	Utah.	4,575	4,575	34,760
Rebellion	"	.....	.....	10,512
Richmond, S. L.	Nev.	.....	.....	672,125
Robinson Con., S.	Colo.	.....	.....	129,000
*Sierra Nevada, G. S.	Nev.	.....	.....	179,061
Silver Bow, G. S.	Mont.	.....	.....	418,875
Silver Cliff	Colo.	.....	.....	26,925
Silver King, S.	Ariz.	41,000	41,000	616,083
Sonora Con. M. & M. Co	"	.....	.....	3,000
Standard, G.	Cal.	145,300	145,300	2,042,118
*Star, G.	Nev.	8,900	8,900	239,755
Stormont, S.	Utah.	13,956	13,956	265,658
*Sullivan, S. L.	Maine.	.....	.....	5,540
Syndicate, G.	Cal.	8,000	8,000	84,587
Tintic M. and M. Co.	Utah.	2,915	2,915	108,071
*Tip Top, S.	Ariz.	.....	.....	98,570
*Tombstone, G. S.	"	.....	..... ‡	1,587,655
*Union Con., G. S.	Nev.	.....	.....	43,000
Vandewater	"	.....	.....	1,700
*Vizina, S.	Ariz.	.....	.....	524,895
Total amount of shipments to date				£26,306,496

* Official. † Net. *G. Gold. S. Silver. L. Lead.* ‡ Assay value. ¶ Totals thus far, 1882, $1,392,478

Bullion Receipts at New York.—The bullion received from the mines at the various offices in this city during the week ended Febuary 10th, as compiled from various sources, amounted to $316,000 as against $255,453.57, reported for the previous week. The receipts from January 1st, 1882, to date are $1,870,373.13.

Exports of Gold and Silver from New York.

Week ended February 4th	$3,610,840.00
Corresponding week last year	120,813.00
Since January 1st, 1882	4,819,520.00
Corresponding period last year	895,293.00

Foreign Bank Statements.—The Governors of the Bank of England at their weekly meeting made no change in the minimum rate for discount, and it remains at 6 per cent. During the week, the bank gained £529,000 bullion, which reflects a heavy movement from the interior toward the financial center, and the proportion of reserve to liabilities was raised from 31⅛ to 32⅛ per cent, against 45 per cent at same date last year. February 9th, the bank gained £209,000 bullion on balance. The weekly statement of the Bank of France shows a gain of 76,850,000 (?) francs gold and a loss of 13,175,000 silver.

METALS.

NEW YORK, Friday Evening, Feb. 10.

There are no special features which, as a whole, affect the metal markets. The news from abroad concerning the developments in financial circles at Paris and elsewhere are better, though the sky is not entirely cleared as yet.

Copper.—Practically nothing has been done during the week. Manufacturers, it seems, are quite generally adopting the policy of quietly awaiting de-

velopments, and are making it a point to buy only from hand to mouth. For the present, they are tolerably well supplied, and are, therefore, in a position to hold off for a considerable time. There is no pressure to sell, as there is very little in second hands, and as the companies firmly insist upon 20c. It is believed, however, by some, that if forced to enter the market holders would find it difficult to realize more than 19⅛@19¼c. for round lots. We hear rumors to the effect that there is a speculative element which is disposed to enter the market if acceptable concessions are made.

From Messrs. James & Shakspeare's daily reports from London, we learn that on the 23d ult. Chili Bars were selling as low as £66⅜ sharp cash, the next day witnessing a decline to £65¾, less discount only. On the 25th, the market slowly recovered, sales being made up to £66⅛ for Chili Bars sharp cash. On the 26th, the date of our latest advices, they were fairly steady, sales of cash metal being noted from £66¼@ £66⅜.

Tin.—In large lines, no business has been done, the bulk of the tin in this market being, we understand, held by large dealers who are jobbing it out to consumers in small lots at 25⅛@25¼c. The latest cables are reported to be as follows: London, £111 10s. spot and £113 10s. future; Singapore, $35⅜, and Penang, $34⅞.

According to the daily reports received from Messrs. James & Shakspeare, of London, tin was easier on the 23d ult., selling at 113¼s. spot cash; this movement continued to the 25th, when there was a sudden fall to 110⅞s., closing on the 26th at 111⅞s. for sharp cash, and 113¼s. for three months metal.

Tin Plates.—These remain quiet at the following quotations for large lines: Charcoal tin, Melyn grade, rates for ¼ cross assortments, $6.50; Allaway grade, rates for ⅛ cross assortments, $6.15@ $6.20. Charcoal terne, Dean grade, 14×20, $5.62½ @$5.55; Allaway grade, IC, 14×20, $5.35@ $5.37½. Coke tin, Osborne grade, IC, $5.75@$5.87½; Yspitty grade, IC, $5.62½@$5.75; B. V. grade, IC, $5.37½@$5.40. Coke terne, Glais grade, IC, 14×20, $5.25.

Lead.—Some business has been done during the week in common lead at the rate of 5·15c. for March delivery, and the tone here is somewhat better. There are conflicting rumors concerning the course of prices abroad, some stating that they are somewhat weaker, while we learn from others that they are firmer. In the West, there have been sales of 700 tons of Refined Lead at 5c. for March delivery, while Common is quoted there 4¾@4·9c. Freights are 29c. per hundred pounds.

Spelter.—This metal is quiet, but tolerably firm. The present inactivity is attributed to the fact that the consumers have been well supplied for the present by recent heavy purchases. We quote 5¾@5⅞c. for Silesian and Western.

Antimony.—Cookson's is quoted at 15c., and American at 13c.

Quicksilver.—Our London correspondent of January 10th writes us that the total stock on hand December 31st, 1881, was 94,000 flasks; of this 12 000 bottles were in first hands—the balance held by speculators, bought long since at a high price. The spot rate here is 37c.

The exports for the week, by sea, were as follows:

To China per Belgic, hence 26th inst.:		
Wing Chong Wo & Co	400	$11,600
Degener & Co	50	1,400
To Yokohama per same:		
Mendleson Brothers	210	5,950
Totals	660	$18,950
Previously since Jan. 1st, 1882	2,049	62,601
Totals since Jan. 1st, 1882	2 699	$81,551
Totals same period 1881	4,029	113,956

Receipts since January 1st, 1882, 4029 flasks.—*Commercial Herald, February 2.*

The product of the quicksilver mines of California is estimated at 58,635 flasks in 1881, against 57,083 flasks in 1880.

IRON MARKET REVIEW.

NEW YORK, Friday Evening, Feb. 10.

The week under review has been a quiet one. There may be a shade of weakness in some articles, but it is not marked. The financial troubles abroad have had a tendency to create a conservative feeling for the present. The consumption, however, is still as large as it has been, and it is only a fear that it will decrease later on in the year that acts as a depressing influence.

Pig-Iron.—There is but very little doing in the way of new orders. There is, however, a very fair inquiry and prices are quite firm. We quote No. 1 Foundry at $26½@$27; No. 2 Foundry, $25@$25½; and Forge, $24.

Scotch Pig.—There have been sales of about 1000 tons, mostly Coltness and Glengarnock. The weather has acted as an influence in curtailing business. We quote Glengarnock at $26@$26½; Eglinton, $25; Coltness, $27¾@$28½; Gartsherrie, $26½@$27; and Summerlee, $27. Prices in Glasgow are lower, but the business there is increasing. Higher rates of exchange and freights prevent a decline in this market.

Rails.—Sales of 13,000 tons of steel at $57½ at Scranton are reported. In addition to this, another Pennsylvania mill reports sales of 5000 tons on private terms. Prices are weaker than they were a month ago. We quote at $57@$58 at mills, although we have heard rumors of even lower prices. Iron rails are quiet, although inquired for in large quantities. We quote in Pennsylvania at $48½@$50.

Old Rails.—There has been a business of perhaps 5000 tons since our last, at $30 for Ts and $31½@ $31¾ for D. Hs.

Wrought Scrap—Is arriving quite freely, and is taken at $30.50@$31, ex ship.

We publish the following letters from our regular correspondents:

Baltimore. Feb. 7.

[Specially reported by R. C. HOFFMAN & Co.]

The iron market for past week has been quiet, the demand regular, and prices unchanged. We quote as follows:

Balt. Char	$36.00@$38.00	Anth. No. 3	$21.00@$23.00
Va. "	36.00@ 38.00	Mot. & Wh	20.00@ 21.00
Anth. No. 1	26.00@ 27.00	Cl'd B. Blom	70.00@ 75.00
" " 2	24.00@ 25.00	Refined "	60.00@ 65.00

Cincinnati. Feb. 8.

[Specially reported by JACOB TRABER & Co.]

There is a decided lull in our pig-iron market. Consumers are reluctant to buy to any extent at prevailing prices, feeling convinced that they will not be higher; those compelled to buy will only do so to supply present wants. Furnace-men know that stocks in the regions tributary to this market are small, and, rather than force sales by concessions, are satisfied to wait a little while, until the weakness created by unfavorable foreign news has blown over. If present rate of consumption is not diminished, prices will be fully sustained we continue our quotations from last week.

	Four mon'ths.
No. 1 Hanging Rock Charcoal	$29.50@$30.00
" 2 " " "	28.50@ 29.00
" 1 Tenn. Charcoal	28.50@ 29.00
" 2 " "	27.50@ 28.00
" 1 Hanging Rock and Virginia Coke	28.50@ 29.00
" 2 " " " "	27.50@ 28.00
Jackson G. and C. Range	24.50@ 28.00
Hanging Rock C. B. C. Wheel, all Nos	39.00@ 40.00
Virginia " " "	38.00@ 39.00
Southern " " "	37.00@ 38.00

Louisville. Feb. 7.

[Specially reported by GEORGE H HULL & Co.]

The market continues very strong with a few buyers in the market. Some of these, however, are for large amounts, and for delivery all through the year 1882. Some round sales have been made for cash at figures quoted below.

FOUNDRY IRONS.

	No. 1.	No. 2.
Hanging Rock Charcoal	$30.00@$31.00	.....@ ... ..
Southern Charcoal	28.00@ 29.00	.....@ .....
H'ng Rock, Ste'l & Coke	28.00@ 28.50	.....@ ... ...
Southern Stonecoal & Coke	27.50@ 28 00	$26.00@$26.50
Amer. Scotch	$25½@$26	Op'n Silv'r Gray...$25@$26
Cl'se Silver Gray	23½@ 24	

MILL IRONS.

No. 1 Charcoal	$25.00@$25.50
No. 1 Stonecoal and Coke, neutral	25.00@ .....
No. 2 Stonecoal and Coke, neutral	23.00@ 24.00
No. 1 Stonecoal and Coke, cold-short	23.00@ 23.50
No 2 Stonecoal and Coke, cold-short	22.00@ 22.50
White & Mottled, cold-short and neutral	21.00@ 23.50

CAR-WHEEL AND MALLEABLE IRONS.

Hanging Rock, cold blast	$36.00@$38.00
Hanging Rock, warm blast	30.00@ 32.00
Central Kentucky, cold blast	34.00@ 38.00
Alabama and Georgia, warm and cold blast	34.00@ 38.00

Richmond. Feb. 6.

[Specially reported by ASA SNYDER.]

This market for pig-iron continues strong, with a fair amount of business transacting. Consumption and production are so nearly balanced that it is difficult to predict the future of the iron trade. Prices remain unchanged as follows:

Scotch Pig-Iron		$26.00@$28.00
Anthracite Pig-Iron	No. 1	27.00@ 29.00
" "	No. 2	24.00@ 25.50
" "	No. 3	.....@ 23.50
Virginia Coke Pig-Iron	No. 1	25.00@ .....
" "	No. 2	22.50@ 23.50
" "	No. 3	20.00@ 23.00
Va. Charcoal C. B. Wheel Iron		34.00@ 36.00
Old Rails		29.00@ 31.00
Wrought Scrap No. 1		26 00@ 28.00
Cast Machinery Scrap		20.00@ 21.00
Richmond Refined Bar-Iron		2 8-10@ 03
Horse-Shoes (Tredegar)		@ 4.00
Mule " "		@ 5.00

Philadelphia. Feb. 10.

The following are ruling quotations in this market: No. 1 Foundry Iron, $21@$22; No. 2, $24.50@$25; Gray Forge, $22@$23; White and Mottled, $20@ $21.50; Bessemer Pig, $27@$28; English, $21.50@$22 asked; Scotch, $24.50@$26.50. Muck Iron is quoted at $47@$48. Charcoal Blooms, delivered, are worth $75, and Anthracite Blooms, at furnace, $60@$61. Bar Iron is quoted 3c. at store, and 2·9c. at mill. Nails are $3.40 net. Structural Iron, Angles, 3¼c.; Beams, 4c.; Channel and Tees, 4@4¼c.; Tank Iron, 3½c.; Bridge Plate, 3½c.; Refined Iron, 3¾@4c.; Shell, 4¼ @4½c.; Flange, 5@5½c.; Fire-box, 6@6½c.; Wrought Pipes, 55 per cent off; Tubes, 37½ per cent off. Steel Rails are quoted at $54.50@$60, and Iron Rails, $48.50@$54, according to sections. Steel blooms are without quotations; they are cabled at £6 abroad. Old rails are uncertain; there have been sales at $30@ $31 for tees. Scrap-iron is worth $32@$34.50; for choice No. 1 wrought $30@$32 is asked; for No. 2, ex store, $28; and for car-wheel, $21@$22.

The consumers of pig are more active. The advance of merchant bar to 3c., agreed upon by storekeepers, will lead to an active demand, as consumers are somewhat uncertain as to the probable course of iron in the West. Nail manufacturers are in receipt of inquiries on April account, but makers here are not anxious to anticipate wants to such an extent. The inquiries for construction iron are fully maintained for the business for the past six weeks, since the opening of the year. The quotations are hardening. The plate orders are for larger amounts than usual, and extend in some cases to summer deliveries. The weakening tendency in Rails brought a fresh inquiry into the market, and if the makers' terms of del 1 very can be accepted, some important transactions will be closed in a few days at, it is stated, between $56@$58. Old rails have been active, sales within a week aggregating 12,000 tons. Several lots of new iron rails have been offered at $49; Scrap has been only moderately active at quoted figures.

COAL TRADE REVIEW.

NEW YORK, Friday Evening, Feb. 10.

Anthracite.

Although the two snow-storms of last week greatly curtailed production, and the companies are now carrying out the first of three half weeks' closing of collieries, prices have not improved a particle over those which prevailed when there appeared to be a question whether the companies would agree. All sizes except chestnut are being shaded. It may be stated, however, that there is a better feeling among the producers, and coal is not forced for sale as much as it was. The new business is notoriously small. This is mostly owing to the mildness of the winter, but is in part due to the fact that many dealers and consumers are holding back orders, in hopes of buying at lower prices, which they would place were the market a strong one and had the full confidence in the policy of the companies.

The indications of labor troubles are increasing. A press dispatch received more than a week ago mentioned that the miners employed by Charles Parish & Co., of Wilkes-Barre, were organizing, and it is said that the Delaware & Hudson Canal Company's miners have made a demand for an advance of wages. If the miners are moderate in their demands, the companies will probably accede to them, and thereby avoid a cessation of mining; but if their demands are excessive, the companies will make a stand. As the Lehigh and Schuylkill miners are paid upon the basis system, it is hardly probable that any trouble will be experienced there.

Vessels still continue scarce, but in small demand, so that rates of freight are low.

Our Philadelphia correspondent, under date of February 9th, says:

The elements have combined with the agreement of the companies to effect a most timely curtailment in the production, and the small amount of coal now reaching tide is so reduced that, if it continues for the rest of the month the market by the beginning of March will be in a good, healthy condition. There is a scarcity of sizes for manufacturing purposes on the Schuylkill and Lehigh. Shipments from Port Richmond are pretty much confined to the steam colliers of the Reading. Freights by sailing vessels from here to the Sound or around the Cape are entirely too high compared with New York—$2.25 to Boston, and can only be loaded with special coals not obtainable in New York.

The production of anthracite coal last week was 469,130 tons, as compared with 315,529 tons the previous week, and 357,969 tons the corresponding week of 1880. The total production from January 1st to February 4th was 2,100,480 tons, as against 1,819,

FREIGHTS.

Coastwise Freights.

Per ton of 2240 lbs.

Representing the latest actual charters to Feb. 10th, 1882.

PORTS.	From Philadelphia.	From Baltimore.	From Elizabethport, Port Johnston, South Amboy, Hoboken, and Weehawken.
Alexandria			
Annapolis			
Albany			
Baltimore			1.00
Bangor			1.75
Bath, Me			1.60
Beverly			1.60
Boston, Mass	2.00@2.10		1.50@1.60
Bristol			
Bridgeport, Conn.			.45
Brooklyn			
Cambridge, Mass.			
Camoridgeport			
Charleston	1.05		1.80
Charlestown			1.50
Chelsea			
City Point			
Com. Pt., Mass.			
E. Boston			1.50
East Cambridge			
E. Gr'nwich, R. I.			
Fall River			1.00
Galveston			
Georgetown, D.C.			
Gloucester			
Hartford			
Hackensack			1.00
Hudson			
Lynn			
Marblehead			
Medford			
Millville			
Milton			
Newark, N. J			
New Bedford			1.10
Newburyport			1.75
New Haven			.45
New London			.75
Newbern			1.00
Newport			
New York			
Norfolk, Va	1.00		
Norwich			.65
Norwalk, Conn			¶1.10
Pawtucket			
Philadelphia			1.50
Portland			1.50
Portsmouth, Va.			
Portsmouth, N.H.			1.65
Providence	1.90		1.40
Quincy Point			
Richmond, Va			
Rockland			
Rockport			
Roxbury			
Saco			
Sag Harbor			1.00
Salem, Mass			
Saugus			
Savannah			1.00
Somerset			
Staten Island			
Trenton			
Troy			
Wareham			
Washington			
Weymouth			
Williamsbg, N.Y.			
Wilmington, Del			
Wilmington, N.C			

* And discharging. † And discharging and towing. ‡ 3c. per bridge extra § Alongside. ‖ And towing up and down ¶ And towing. ** Below bridge

921 tons for the like period of last year, showing an increase this year of 280,559 tons.

Bituminous.

A scarcity of cars still keeps the market practically free of coal, and prices are quite strong. We quote at $5 per ton. Desirable customers can shade this price, however. Freight rates from Baltimore and Philadelphia are high. There will be a meeting of the Cumberland coal producers at Baltimore next week—probably on Thursday—to discuss the advisability of reducing miners' wages and other questions of interest. The miners of the Cumberland District have made an appeal to the Clearfield miners to demand an advance of wages. Their argument is a great deal like the policy adopted by the transportation companies, that if there is to be any profit in mining coal, they are entitled to it. This should not deter the Cumberland producers in uniting for the purpose of making the necessary reduction in wages. The following is the text of the circular letter :

AN APPEAL FROM THE EXECUTIVE BOARD OF THE K. OF L. OF ALLEGANY AND GARRETT COUNTIES, MD.

To the Miners of Clearfield County, Pennsylvania:

FELLOW-WORKINGMEN : The miners of the above counties in Maryland, through their executive officers, wish to call your attention to the following :

We believe the time has arrived when you should make another effort to demand the price paid for digging coal, namely, 65 cents per ton. There are no reasons whatever that you should not have it, but there are abundant reasons why you should. The bituminous coal trade was never in a better condition, and the coal trade journals, without exception, predict that the year 1882 will be a prosperous one ; that the demand for bituminous coal will be great and a good price paid for it. The Clearfield coal in the Eastern markets commands as large a price as the George's Creek coal. Transportation to market is lower ; in fact, every thing is in your favor to demand the same price for mining as paid in Maryland. Then, why not do it ? The various trades throughout the Union have demanded higher wages, and, in all places where the demand was made with the determination to win, they were successful. Surely no one will say that you don't need an advance, and no one can say that you are not entitled to an advance.

You should keep step with regions that produce the same article and send it to the same market. In working for lower wages than the Maryland miners, you give your operators privileges, and aid them in underselling our operators in market, thereby assisting them in keeping the wages of their employés low. You are a stumbling-block in our way to advance with the good times that our noble country is blest with. Our coal has in the past months been high enough in market to justify us in demanding another advance ; but when we look around us and see the great Clearfield region already 15 cents per ton below us, we have to be satisfied with what we have.

We, as toilers, are determined by fair means to secure a proper share of the wealth we create and more of the leisure that rightfully belongs to us, and we ask you to go hand in hand with us, always holding before our eyes the old saying—"United we stand, divided we fall."

Yours in the ... & H. O.,

EXECUTIVE COMMITTEE.

President Gorman has assured the shippers of Cumberland coal that the Chesapeake & Ohio Canal will be opened about April 1st. This is good news, and all parties are to be congratulated upon the fact that the recent fears of obstruction were without foundation.

We learn of no contracts having been made for this year's business, although it is said that there has been considerable talking about them.

The Snow Shoefield is steadily assuming importance, and we should not be surprised to see it surpass Clearfield in a few years. It is the nearest bituminous coal to the New York market, and should secure a large business North, and in the Lehigh, Schuylkill, and Susquehanna valleys, especially for coke in the three latter districts. This field must eventually attract the attention of either the Lehigh Valley, Central Railroad of New Jersey, Reading, or New York Central railroad. But very little road would have to be built to connect it with the Reading and New York Central systems. The field, however, would be much better off if the Lehigh Valley or New Jersey Central be extended to it.

STATISTICS OF COAL PRODUCTION.

Comparative statement of the production of anthracite coal for the week ended Feb. 4th, and years from January 1st :

TONS OF 2240 LBS.	1882.		1881.	
	Week.	Year.	Week.	Year.
Wyoming Region.				
D. & H. Canal Co..	74,129	283,636	68,452	267,024
D. L. & W. RR. Co.	73.892	342,977	63,935	311,151
Penn. Coal Co.....	17.759	83,561	13 392	81,357
L. V. RR. Co.....	24,395	97.593	15,455	91,530
P. & N. Y. RR. Co..	3,758	15.167	706	3,381
C. RR. of N. J.....	*20,903	172.617	.....	100,828
	214,836	995,551	162,440	855,251
Lehigh Region.				
L. V. RR. Co.....	88.365	347,702	76,004	330,058
C. RR. of N. J.....	*19,931	156,742	.....	83,474
S. H. & W. B. RR..	.....	523	.....	.....
	108,296	504,967	76,004	413,532
Schuylkill Region.				
P. & R. RR. Co.....	118,975	488,135	110,543	470,849
Shamokin & Lykens Val.....	26,855	108,009	7,954	74,747
	145,830	596,144	118,497	545,596
Sullivan Region.				
St Lue&Sul.RR.Co.	168	3,818	1,028	5,542
Total	469,130	2,100,480	357,969	1,819,921
Increase.....	111,161	280,559	.....	.....
Decrease	.....	.....	.....	.....

The above table does not include the amount of coal consumed and sold at the mines, which is about six per cent of the whole production.

* Three days ended February 3d.

Belvidere-Delaware Railroad Report for the week ended Feb. 4th :

	Week.	Year. 1882.	Year. 1881.
Coal for shipment at Coal Port (Trenton)	.....	.....	.....
Coal for shipment at South Amboy	13,605	68,049	48,709
Coal for distribution	15,158	6 ,454	68,732
Coal for company's use	3,057	11,282	11,656

The increase in shipments of Cumberland Coal over the Cumberland Branch and Cumberland & Pennsylvania railroads, amounts to 40,083 tons, as compared with the corresponding period in 1881.

The shipments of Cumberland Coal, over the George's Creek & Cumberland R.R., by the Maryland and the American Coal companies, for the week ended Feb. 4 h, amounted to 3045 tons, and for the year from Jan. 1st, 20,295 tons.

The Production of Bituminous Coal for the week ended Jan. 28th was as follows :

Tons of 2000 lbs., unless otherwise designated.

	Week. Tons.	Year. Tons
Cumberland Region, Md.		
*Tons of 2240 lbs	40.394	191,083
Barclay Region, Pa.		
*Barclay RR., tons of 2240 lbs.	7.505	40,233
Broad Top Region, Pa.		
*Huntingdon & Broad Top RR.	4,469	21.417
East Broad Top	2,025	8,035
Clearfield Region, Pa.		
Snow Shoe	2,625	10,508
Tyrone and Clearfield	42,668	182,892
Alleghany Region, Pa.		
Pennsylvania RR.	7.414	33,202
Pittsburg Region Pa.		
West Penn RR	6.248	26,080
Southwest Penn. RR..	690	2,215
Penn & Westmoreland gas-coal, Pa. RR.	26,170	102,586
Pennsylvania RR..	13,373	53,222

* For the week ended February 4th.

The Transportation of Coke over the Pennsylvania Railroad for the week ended Jan. 21st, and year from Jan 1st :

Tons of 2000 lbs.	Week.	Year.
Penn. RR. (Alleghany Region)	2,143	8,532
West Penn. RR.	1,815	10,602
Southwest Penn. RR	34,908	144,354
Penn. & Westmoreland Region, Pa. RR	5,606	22,532
Pittsburg, Penn. RR	12.166	48.6:8
Snow Shoe (Clearfield Region)	632	2.673
Total	57,370	237,521

Horsford's Acid Phosphate

In Malarial Troubles.

Horsford's Acid Phosphate is an excellent adjuvant in malarial troubles. In despondency and debility, it has beneficial effects.

A SYNDICATE ARE SELLING BEAR Creek Mining Company Preferred Stock for $1 per share, with 8 per cent interest for five years, guaranteed by Trust Company, in addition to dividends from mines. The first interest dividend payable March 1st.

It would be well for investors with large or small sums to examine this stock.

For particulars or stock address MUTUAL TRUST COMPANY, 115 Broadway, or CHARLES S. BAUER, Secretary, 145 Broadway, Room 11.

OFFICE OF THE ONTARIO SILVER MINING COMPANY, 18 Wall Street,

NEW YORK, Feb. 6, 1882.

DIVIDEND NO. 76.

The regular monthly dividend of FIFTY CENTS PER SHARE has been declared for January, payable at the office of the transfer-agents, Wells, Fargo & Co., 65 Broadway, on the 15th inst. Transfer books close on the 10th inst.

H. B. PARSONS,
Assistant-Secretary.

OFFICE OF THE DEADWOOD-TERRA MINING COMPANY, 18 Wall Street,

NEW YORK, Feb. 9, 1882.

DIVIDEND NO. 15.

A dividend of thirty thousand dollars, being fifteen cents per share, has been declared for January, payable at the office of the transfer-agents, Wells, Fargo & Co., 65 Broadway, on the 20th inst. Transfer-books close on the 15th.

H. B. PARSONS, Secretary.

OFFICE OF THE JOCUISTITA MINING COMPANY, No. 31 Broad Street,

NEW YORK, Feb. 8, 1882.

DIVIDEND NO. 3.

The Jocuistita Mining Company has this day declared a dividend of ONE HUNDRED AND FIFTY THOUSAND DOLLARS, being a quarterly dividend of one dollar per share, and an extra dividend of fifty cents per share, payable at the office of Lounsbery & Haggin, No. 18 Wall Street, on the 28th inst.

Transfer-books close on the 23d inst.

R. P. LOUNSBERY, Treasurer.

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